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Grading and Packing of Cherries

(By Basil Krone, Victorian Fruit Packing Instructor.)

IF the Victorian Cherry market is to be developed on sound lines, it is essential that suitable methods of harvesting, grading, packing, and marketing be adopted. The first steps in successful marketing of this luscious fruit are careful harvesting and handling, as the Cherry is particularly susceptible to the slightest injury. Although the market requires hard, firm Cherries, the fruit should not be harvested until it is fully developed and has reached that stage of maturity (seemingly unripe), which will ensure the completion of the ripening process.

Grading.

The grading of Cherries should be carried out along the following lines:—Classify the fruit by two grades, viz., "Extra Fancy" and "Fancy," according to market requirements. In some instances it may be more profitable to mix the two grades and market as "Fancy." This practice frequently is adopted with success by citrus, Apple, and Pear growers.

There are seasons when the quality of the Cherry crop is above the average. In addition, there is always an excellent market for specially selected Cherries.

"Extra Fancy" Grade.

(a) Black varieties should be colored dark red or black.

(b) White varieties should be colored yellow, over the whole surface, with red flush.

(c) Size. — Each Cherry should measure not less than $\frac{3}{8}$ inch in diameter.

"Fancy" Grade.

(a) Black varieties should have not less than three quarters of the surface colored.

(b) White varieties should have not less than three-quarters of the surface colored.

(c) Size. — Each Cherry should measure not less than 11-16ths of an inch in diameter.

All fruit should be free from blemish, cracks, and malformation; fully developed, with stalks intact.

White lining paper should be used in all instances, except where a special grade, such as "Extra Fancy" is desired. In such instances a colored lining paper might be used as a distinguishing mark.

In exceptional seasons quantities of Cherries are produced, which would not comply with the above standards. This fruit should be disposed of in containers other than the 12-lb. Cherry box which denotes a high-class article.

Packing.

Packing the Cherry is a simple operation, nevertheless care is necessary. The packer must remember that the bottom of the box when finished ultimately will become the top, therefore after lining the box with clean white lining paper, the Cherries should be lifted by the stalks direct from the picking box or bucket, and packed in rows on the bottom of the box, drawing all of the stalks upwards. The rest of the Cherries are simply filled in, but not indiscriminately; they are handled by the stalks and filled to a height slightly above the top of the case. The contents are gently shaken until the lid can be easily nailed. The box is then turned over, and branded in such a manner that the buyer will not be in doubt regarding the lid.

The case recommended for universal use is the "4 bushel," now known as the "12-lb. Cherry box." It is gratifying to notice the increasing popularity of this box, and its more

A NEW PEACH.

The "Nectar" in California.

A new Peach is being introduced in California under the name of "Nectar." It was discovered several years ago by Mr. O. P. Blackburn, and appeared to be a cross between the Stanwick Nectarine and the Red Birch Peach.

It is said to have a most delicious flavor, an absence of fuzz, a creamy white skin with a high Peach aroma. It is a rapid grower, having a strong framework, and has always set a good crop in the trees already bearing. Planting is protected by patent rights, but moderate supplies are now available, and it is expected that Nectar will become a very popular variety.

general adoption. The dimensions and specifications of timber required for manufacturing the 12-lb Cherry box, which is 13 $\frac{3}{4}$ inches long, 10 $\frac{1}{2}$ inches wide, and 4 inches deep (inside measurements), are as follow:—

Ends.—2 pieces, 10 $\frac{1}{2}$ inches long, 4 inches wide, $\frac{1}{2}$ inch thick.

Sides.—2 pieces, 14 $\frac{1}{2}$ inches long, 4 inches wide, 5-16 inch thick.

Lids and Bottoms.—4 pieces, 14 $\frac{1}{2}$ inches long, 5 $\frac{1}{4}$ inches wide, $\frac{1}{2}$ inch thick.

(Cubical content of box—556 $\frac{2}{3}$ cubic inches.)

Salient Points for the Packer.

1. Avoid harvesting or packing wet Cherries. Blemished and split Cherries are chiefly due to wet conditions.

2. Handle Cherries by the stalk carefully, and not by the fruit.

3. It pays to grade Cherries for quality.

4. Stalkless Cherries in a pack are frequently the cause of patches of decayed fruit in a box; reject all such.

5. The 12-lb. Cherry box only should be used for high-class Cherries.

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Jonathan Spot of Apples

Measures for Control

Jonathan Spot appears scattered over the surface of mature fruit as more or less circular, brown to blackish, slightly depressed spots, varying from one-sixteenth to one-quarter of an inch in diameter. The appearance of the spots is not unlike bitter pit, but they differ in that they are generally skin deep and only extend into the pulp in the case of the larger spots, and are associated with the lenticels (small openings on the surface of the fruit adapted for breathing).

The cause of the disease is not known, states an article in the "N.S.W. Agricultural Gazette"; various theories have been advanced as to the reason for its development, but there is no experimental evidence for their

support. The trouble appears to be of physiological origin, and not due to an organism.

Jonathan Spot may appear while the fruit is on the tree, in ordinary storage, in cool store, or in transit.

It is claimed that it is more common following a dry season and on fruit kept in an ordinary storage for some time before being placed in cool store.

Poor ventilation and improper storage temperatures favor its development. Fruit which is allowed to hang too long is more commonly affected than that harvested at the correct picking stage.

The disease is not confined to the variety Jonathan, as the name suggests, for it has been recorded on

Five Crown, Newtown Pippin, Dougherty, Granny Smith, Yates, Cleopatra, Tasma, Esopus Spitzenburg and French Crab in Australia, and on Rome Beauty, King David, and other varieties in the United States.

The following control measures are recommended:—

1. On the first indication of development of the disease, harvest and market the fruit without delay.
2. Harvest the fruit at the correct picking stage.
3. Place the fruit when harvested immediately in cool store. Delayed storage increases Jonathan Spot. High temperatures between harvesting and cool storing should be avoided. A temperature of 33 to 34 deg. Fahr. is considered to be the most suitable, and good aeration is essential.
4. The storage life of Jonathan is from three to four months; it is not advisable to hold the fruit for a longer period.

The disease is not controlled by the use of oiled wraps.

The Apple Leaf Hopper

Time to Spray.

Where spraying for the control of the Apple Leaf Hopper has not yet been carried out, it should not be further delayed. This common pest of Apples sucks the sap from the foliage, thus causing it to become mottled grey in color. The leaves may turn yellow and fall prematurely. In addition, the insects settle on the fruit and there deposit an unsightly brown excrement which reduces its value, and may even render it unmarketable.

Life History.

The adult Leaf Hopper, which is approximately one-sixth of an inch in length, is greenish-yellow in color, with conspicuous reddish-brown eyes. Its hind legs are adapted for jumping, and the insect both hops and flies readily when disturbed.

In the Spring the young Leaf Hoppers hatch from eggs laid in the bark during the previous Autumn. The Leaf Hoppers make their way to the under sides of the young leaves and there, after a series of moults, they reach the adult stage. The nymphal period occupies from three to six weeks.

The adults of the first brood lay their eggs in the petioles and mid-ribs of the leaves, and there are two main broods during the season.

Control.

Owing to the protected position in which the eggs are laid, and the fact that the adults fly readily when disturbed, the best control can only be expected by applying the spray when the majority of the hoppers are in the wingless nymphal or immature stages.

A spray consisting of 1 pint nicotine sulphate plus 1½ lb. hard soap in 75 gallons water gives the most satisfactory control of this pest. Two applications are recommended, the first to be made just before any Hoppers reach the winged stage, and the second from three to four weeks later, in order to destroy the Hoppers which have hatched after the first spray application.

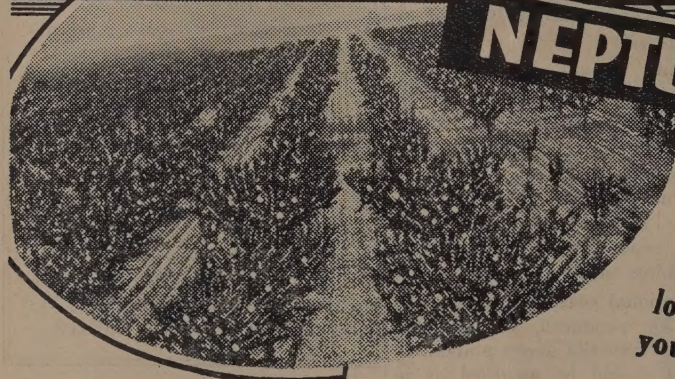
These two sprayings can be conveniently and more economically combined with the calyx spray and the first cover spray of lead arsenate for Codlin Moth control, but if this is done the soap should be omitted from the spray mixture.

In practice, lime-sulphur for the control of Black Spot is usually combined with the calyx spray of arsenate of lead for the control of Codlin Moth, and this lime-sulphur spray kills sufficient of the Leaf Hoppers to render the first application of nicotine sulphate unnecessary. However, to complete control of the Apple Leaf Hopper it will always be necessary to apply a nicotine sulphate spray with the first cover spray used for Codlin Moth control.

It is important to spray all parts of the fruit and foliage thoroughly, paying particular attention to the under sides of the leaves, where the Leaf Hoppers are sheltering.

I shall pass through this world but once. Any good, therefore, that I can do, or any kindness that I can show to any human being, let me do it now. Let me not defer or neglect it, for I shall not pass this way again.

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Codlin Moth Control Control of Fruit Fly in Stanthorpe District, Queensland

Some Seasonable Reminders — Calyx Spray Important

During October the over-wintering larvae of the Codlin Moth will have pupated in considerable numbers. The earliest moths usually emerge a few days before the application of the calyx spray, reaching a peak early in November and continuing to emerge until January of the following year.

It is advisable to complete the Winter clean up as expeditiously as possible, if this has been at all overlooked. As many of the larvae change from their over-wintering quarters when about to pupate in the Spring, a second inspection of the trunks, especially if the bandages are in position, may prove of value in reducing the Spring brood moth emergence.

Clean Up Packing Shed, Etc.

Attention should also be paid to the cleaning up of the packing shed and old cases which may have held infested fruit during the past season. If the shed is moth-proof the doors should be kept closed and the moths emerging may be killed at the windows to which they fly in their attempts to escape. The larvae Wintering in the cracks and corners of the cases may be destroyed by dipping the cases in boiling water for three minutes.

The escape of moths from the shed is of importance also in that the peak emergence is usually about two weeks later than the normal emergence in the field. This allows of a more protracted peak period, and makes the timing of the later sprays more difficult.

Calyx Spray Most Important.

The calyx spray, which is applied before the sepals of the flowers close and when the majority of the petals have fallen, is the most efficient of all the Codlin Moth sprays in preventing injury. If properly applied, using lead arsenate powder at the rate of 1½ lb. per 50 gallons water, the calyx infestation will be entirely eliminated.

It is usual to apply a combination spray at this time, aiming at the

control of Codlin Moth, Apple Leaf Jassid and various fungous diseases. For this purpose lead arsenate (24 oz. per 50 gallons spray), lime-sulphur (1 in 40—27 deg. Baume) and nicotine sulphate (1 in 800) are employed. The lime-sulphur should first be placed in the spray tank and the bulk of the water run in. The lead arsenate powder is then mixed with casein lime spreader or with double the quantity of hydrated lime and made into a fine paste, and finally several gallons of water added. This is then added to the spray tank, preferably with the agitator running. A mixture such as this should be used immediately, and not held in the tank over dinner hour or other such periods.

The nicotine sulphate does not cause any reaction likely to cause injury, and the lime-sulphur in this instance serves as an activator. Soap is unnecessary, and likely to prove injurious if used in this combined spray.

A combination spray such as this will very materially reduce the infestation of Codlin Moth, Woolly Aphid, Red Mite, and Apple Leaf Jassid.

Follow Up With Cover Spray.

It is important to follow up this spray after a period of three weeks with a cover spray to protect the rapidly-growing fruit. The same spray may be applied with the additional advantage that both lime-sulphur and nicotine sulphate will act partly as ovicides and thus kill a considerable number of the eggs of the Codlin Moth.

Under average conditions the nicotine sulphate may be omitted from the calyx spray and used with more advantage in the first cover spray.

Where bandages are used these should be in position by the end of October or early in November. Inspections should be carried out at intervals not exceeding two weeks from mid-November until the end of March if the maximum results are to be obtained.

(By C. Schindler, Warwick.)

THE control of the Queensland Fruit Fly is the most serious problem in the Stanthorpe district, and is made more difficult by the fact that this pest is native to Queensland, and breeds in the wild fruits. In this it differs from the Mediterranean Fruit Fly, and, in spite of all control measures, it will be impossible entirely to eradicate it. It does not appear to overwinter to any extent in the Stanthorpe district, but comes in each Spring from warmer regions. It is also introduced in late citrus fruits from the coast, which are often infested with fly.

The Department of Agriculture and Stock, supported by most of the growers, has now taken up this matter in earnest. The districts surrounding the Granite Belt are now being inspected with a view to controlling the Fruit Fly there, and special provisions have been made for the destruction of waste fruit from the shops in and around the district.

Extra inspectors are stationed in the district during the fruit season. Compulsory Fruit Fly trapping from October 1 till after the fruit is off, and the proper destruction of all fallen fruit by all occupiers of premises where fruit trees are growing, is enforced in the Stanthorpe and surrounding districts. On the orchards, where large quantities of fruit are being handled, large pits, with a fly-proof cover and tightly-fitting lid, are used for this purpose. Jarvis lure (one teaspoon of imitation vanilla essence, one tablespoon of liquid ammonia, and one pint of water) is used, and the Committee of Direction supplies these materials, and the fly traps to the growers at a specially cheap rate.

Although the poison spray (molasses, fruit juice, and arsenate of lead) has been found to be useful in combating the Mediterranean Fruit Fly, it has been found to be of no value against the Queensland Fruit Fly. Various repellants have been tested; the most effective is a mixture of

Black Leaf 40 (one part in 800), and white oil (one in 80) sprayed on the trees to be protected at least once a week. For trapping, sheltered and damp situations are most favorable; Lemon trees, Quinces, and wattle trees (especially when flowering), and flowering Bignonia vines appear to attract the Fruit Flies, and traps placed in these are very useful. Traps should be kept clean and filled at least twice a week. A clean orchard harbours less Fruit Fly than one covered with weeds or grass, and control by birds and other natural enemies and the gathering of infested fruit are also facilitated by clean cultivation.

DESCRIPTIVE LABELS.

U.S.A. Makes Forward Move.

Grade labelling of canned fruits is provided for in the proposed new Food and Drug Act now being considered by the U.S.A. Congress. The Bill will empower the Secretary of Agriculture to require labels to describe the contents of the can, and labelling terms have already been worked out by the standing committee of the Cannery League of California.

These terms and the proposed descriptive labels mark a decided advance by the canning industry, and are claimed to be an effective defence against what is known as consumer groups for grade labelling. The old requirements of the approximate number of units in a can has been revised to require that the units shall be reasonably uniform in size.

Mr. Salmon was called upon to speak at an election meeting. Upon his rising, the meeting became uproarious, when a man at the back of the hall shouted, "Get back into your tin!"

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AGENTS ALL STATES AND COUNTRY CENTRES.

CITRUS NEWS & NOTES

Citrus Diseases South African Methods of Control

IN discussing the means adopted in South Africa in fighting citrus diseases, Mr. J. M. Hector, of the University of Pretoria, writes as follows in the "Citrus Grower" (S. Africa).

The citrus diseases that are caused directly or indirectly by fungi may occur on any part of the tree. In particular, they are found on (1) the roots, (2) the trunk and main branches, (3) the shoots and leaves, and (4) the fruit. In combating these diseases, several methods have been employed, usually in combination and with varying measures of success.

Before any of these methods are put into operation, two conditions should be fulfilled. The first condition is that the symptoms of the disease

should be so defined and described as to exclude any possibility of confusion. The second and even more fundamental condition demands that the primary cause—the particular species of fungus—should be identified, and its life-history known.

The description of a disease and the precise identification of the fungus, however, are merely prerequisites. They are the means to an end—the formulation of methods of control. Unfortunately, many investigators, even at the present day, seem to regard the establishment of these facts as sufficient in themselves, forgetting or ignoring the fact that the solution of a plant disease problem can only be obtained in the field, the orchard or the grove itself.

Passing to actual methods of control, the oldest and the most generally practised method has been the application in the form of a fine spray of a suitable fungicide. For the control of fruit, leaf and shoot diseases, no better method is known. It should, however, be recognised that spraying is not so much a cure as a means of prevention. As a consequence, spraying may check the further spread of a disease, but it will fail to "cure" a disease, if once established.

Progress in spraying technique has been slow indeed. The copper sprays, such as Bordeaux, were first used 75 years ago; lime-sulphur only came into general use about 25 years ago; more recently, colloidal sprays have been employed though they were first advocated by Auld and the writer before the war. The explanation probably lies in the fact that the botanist has been far too interested in the fungus to the neglect of the disease.

A second and obvious method of control has been the cutting out of the diseased tissue. In the case of

shoots and branches, pruning and cutting off are perfectly successful. When, however, excision is used to remove the infected tissue in the case of cankers and diseases such as gummosis, it is only successful in the case of early attacks when the treatment is carefully and thoroughly carried out. If the outbreak be a serious one, and thoroughly established, methods of excision, such as the Fawcett method for gummosis, will rarely be successful.

In South Africa, the rough Lemon, almost universally used as the root stock, has been found to be markedly resistant to gummosis. At the same time, there is evidence of strain resistance within the group, as trees from certain sources have proved more susceptible than others. Grafted on rough Lemon stock, Grape Fruit has proved to be far more susceptible than Navels, and—so far as the evidence goes—Valencias still less susceptible. As regards other varieties, we have at present insufficient data.

Although Grape Fruit is definitely very susceptible to gummosis, certain strains of the rough Lemon are practically immune. Consequently, if the Grape Fruit be grafted on suitable rough Lemon stock, and the union be made at least 18 inches above ground level, the possibility of infection by gummosis will be reduced to a minimum. Unfortunately, a considerable number of grape fruit trees in the Union have been budded practically at ground level on stocks which appear to possess but little resistance. As a consequence, they are liable to become infected and in certain districts, especially where over-irrigation has been practised, a considerable percentage have already become infected. Treatment by excision of these trees has proved unsatisfactory.

Further experiments along these lines are now in progress, and it may yet be possible to obtain substances which, when injected into the trees, may render them immune to gummosis and similar diseases. Before this hypothesis, however, can be established, much intensive experimental work must be conducted.

It should, however, be noted that the injection method, which has been most successful, is still in the experimental stage, and any grower who employs it must clearly realise that the longest period during which it has inhibited the disease is only a matter of two years. What may happen thereafter, time alone can show.

CITRUS FOR "TEMPERING" STEEL.

A new and very valuable use of citrus by-products has been discovered in California. Mr. W. E. Baier, of the Research Institute of the California Fruit Growers' Exchange, announced that, following experiments made, a substance obtained from Oranges and Lemons has been found satisfactory for "quenching" or cooling steel as part of the tempering process. We know that Oranges put iron into the blood, but their use in hardening steel is a new one on us.

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Sulphur for Citrus Soils

The use of sulphur on groves in need of chemical treatment has proved very effective. It improves the condition of the soil, and carries with it resultant benefits to both trees and crops.

Recent research in soil chemistry in the field of the rare minerals may explain to some extent the results that have been secured through the use of sulphur. Citrus trees require a number of the rarer minerals, and they have been found to utilise these minerals in the sulphate form. When sulphur is present in the soil, it is oxidised into acid. The acid reaction brings these minerals into solution, thereby rendering them available as plant food.

In like manner, it has been proved through soil analysis on a large number of groves that sulphur applied at the rate of 1,000 pounds to the acre has reduced the alkali one full pH value, has brought up the lime content from 45 to 120 parts per million, and the potassium from 25 to 40 parts per million. A soil containing a sulphate count of 175 parts per million will be sufficient for the average grove.

I have had under my observation and care in various citrus districts numerous groves which, previous to my work, had been heavily fertilised over a period of years, but upon which no soil sulphur had been used. At the time I took charge, crop records showed a steady decrease in production. With only one application of soil sulphur these groves responded with larger crops, and fruit of much better size and quality. Hence, it has been demonstrated to the satisfaction of all concerned that soil sulphur serves to liberate the plant foods which, though present in the soil, had been "locked up" like so many other "frozen assets."

In conclusion, it must be clearly understood that sulphur does not take the place of fertiliser; sulphur makes the fertiliser pay.—Joe Haynes, in the "California Cultivator."

FROZEN GRAPEFRUIT JUICE.

A factory has been opened in Fort Pierce, Florida, which will be devoted to the preservation of fruit juice by a freezing process. At the moment only Grapefruit juice is being treated in this way, i.e., by freezing the juice and despatching it in bricks. The new preserving process is supposed to be cheaper and better than any other because no sugar is necessary, and after the bricks have thawed off, the juice is claimed to be as fresh as when taken out of the fruit without losing any of its flavor or nourishing value.

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Citrus Round the World

News from Many Countries

South Africa boasts the world's largest citrus packing house. It is owned by the Sunday's River Citrus Co-operative Company and its trade mark is "Three Rings," so well known on the London market.

The company employs over 5,000 white people, has a large hostel for white girl workers, and gives indirect work to an army of transport workers, case makers, producers of all sorts of citrus fruits; 600,000 cases of Oranges and Grapefruit will have been exported this year, and the expectation for 1937 is 800,000, in addition to quite a large domestic supply.

Argentina is now completing her 1396 citrus picking. Ordinary Oranges were heavier this year, but the Navels and Lemon crops were smaller. Locust damage is reported to have affected production in the South East.

Nigeria (West Africa) Department of Agriculture is experimenting on the introduction of improved strains of citrus fruit. The object is to raise the quality of the fruit for local consumption at the moment and to look ahead for export markets at a later date. Up to date, Nigerian Oranges are of low quality, and what few small shipments have been made, returned low prices.

Japan: Of the total fruits grown in Japan, citrus contributes about 34 per cent., of which the Japanese Mandarin Oranges represents some 80 per cent. Japan exports half a million cases of canned Oranges annually, mostly to Great Britain and U.S.A. To protect citrus production, 10 prefectures in which Oranges are produced, have organised an association which watches the interests of the industry and organises the export trade. Statistics issued by the Japanese War Ministry record an alarming decline in the health of the people, and U.S.A. is trying to arrange for the lowering

of duty on Californian citrus fruits into Japan, as a health precaution.

Mexico: Limes are not only valuable for export from Mexico, but are largely used in the manufacture of essential oils, which greatly helps to stabilise the markets for growers. Limes not suitable for export are thus treated. Most of the trade in essential oils is done with U.S.A.

Germany: The importation of Californian citrus fruits into Germany practically stopped with the 1935 season. Permits were refused by the Agricultural Department. Most of Germany's citrus supplies come from Palestine and Spain, with small quantities from South Africa and Brazil.

U.S.A. has made satisfactory trade agreements with foreign countries that will assist the export of citrus fruits. In some cases American citrus has been accorded entry free of duty, and in others a large reduction. Concessions on Grapefruit have been given by Belgium, Sweden, Canada, The Netherlands, Columbia, Guatemala, France and Finland, whilst Oranges have been given concessions by Canada, Columbia, Guatemala and France.

Russia: In 1913 the area under citrus culture was reported as on 200 hectares, but in 1935 it had grown to 15 times that area. A typical "5-year plan" is being observed in the U.S.S.R. in relation to citrus production. State farms have been established as well as peasant and community farms in Georgia, and in 1935 the sales of citrus fruits were four times those of 1931. Research stations are trying to evolve hardy frost-resistant species and grades of citrus plants and the instruction in cultivation and agricultural technique is proceeding under the operations of the Department of Agriculture.

Denmark must be a rather hard country for wholesale fruit merchants.

NEW NAVEL ORANGE.

Sport from Washington Navel.

The Washington Navel Orange was introduced into U.S.A. from Brazil in 1870, and has become the most popular variety to the present time. A sport variety emanating from the Washington Navel is now announced from America. Discovered about ten years ago, it has been propagated carefully, and is said to have some definite advantages over its original type.

Its name has been registered as the "Robertson Navel," after Warren B. Robertson, upon whose orchard it was evolved. Among many improvements claimed for the Robertson are quoted the fact that it grows in clusters, is more prolific than the Washington, matures several weeks earlier, and its color and soluble solids and acid tests give it a preference.

Under the new system, her "Trade Leader," Mr. Riis Hansen, has power to fix the profit at which fruit can be sold. At the moment it is 11 per cent., but varies with the quantities of fruit allowed entrance during each quarter of the year.

Morocco: The cultivation of Oranges in the French Protectorate of Morocco has steadily increased in recent years until now it has become one of the leading industries. For the period 1928-32 the average number of trees was 344,305; in 1933 it reached 631,966, in 1934 the number was 778,095, and the 1935 estimate is 850,000 trees. Imports of Oranges are decreasing as production is almost sufficient for local consumption, although 2,500 tons of other fruits were imported from Spain in 1935. In the same year exports of Oranges were 6,614,000 pounds, nearly all of which went to France, with a small portion to Algeria. Total production of Oranges in French Morocco for 1935-36 will reach 44,000,000 pounds.

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Cold Storage In Australasia

Cold Storage of Fruit

Several Factors Assist Results

IN a paper delivered by Mr. J. H. Martin, of Lenswood, at the Gumeracha Fruitgrowers' Conference (S. Aust.) recently, and reported in the "S.A. Journal of Agriculture," the matter of cold storage of fruit was dealt with by a grower.

Cold storage of to-day, said Mr. Martin, is a necessary part of the fruit industry, and if handled in an efficient manner, in buildings properly constructed, the out-turn should be eminently satisfactory. If, however, bad management is accorded it, some of the fruit will become unfit for consumption, and be a dead loss to the grower.

Time after time these losses have been experienced and commented upon, but poor results are not always the fault of the store operator. They, of course, at times must bear a certain measure of responsibility, through adopting incorrect methods and tem-

peratures, but on the other hand, the orchardist is oft-times to blame through lack of care during the harvesting period, as each year the appearance of fruit from some growers—although they are in the minority—is of such poor quality that it appears that little thought or consideration has been given to harvesting and selection.

The harvesting and handling of the fruit intended for storage is one of the problems confronting the grower each season, and it is a matter that needs greater consideration, and much thought should be given to the subject in an endeavour to ascertain the best time to pick and have the fruit at the right stage of maturity. Under-developed fruit soon shows signs of wilt, and will be lacking in aroma and flavor, but, on the other hand, over-ripe fruit is liable to develop internal breakdown and skin

blemish; especially with the softer varieties, particularly Jonathans.

It is admitted that the average orchardist has a very fair idea of the stage of maturity at which he should pick, and relies mainly on general appearance, firmness, and color of seeds, etc., but it is desirable that greater care should be exercised with fruit intended for cold storage than that required for immediate markets. If poor quality fruit is placed in store and held for any length of time, it cannot be expected that the out-turn will in any be improved. Cold storage does not rectify faults or blemishes.

Pre-Cooling.

Some stores have a room or part of the loading platform set apart for this purpose. The temperature is controlled and provision made for ample ventilation, as the incoming fruit is prone to give off a considerable amount of carbon dioxide (CO₂) during these early stages. The fresh fruit at this period is also carrying a great quantity of heat, and it would prove a distinct advantage if this were removed, and so would assist materially in the cooling of the main rooms, and at the same time overcome that bad practice of placing hot fruit alongside that which has been in the store for a considerable period and is down to temperature.

If pre-cooling facilities are available, the incoming fruit should be stored therein for about 48 hours if possible, or a minimum of 24 hours. The stacks should be kept as low as possible and the cases stacked loosely,

so that air can circulate freely and percolate through the fruit. If these facilities are not available, the grower can assist materially by harvesting his crop during the cooler hours of the day, by placing it in the open air over-night—weather permitting—and transporting to the store in the earlier hours of the morning.

Pre-cooling does add to the cost of handling, but the better results shown at the end of a long season will amply compensate for the extra cost.

Once the fruit is in the store the attention is then in the hands of the engineer, and his job is to so control the temperature, humidity and ventilation, and it is the knowledge of these principles that denotes either success or failure.

Temperature.

It has been determined with a certain amount of accuracy the temperatures required for the different varieties of fruit, but this factor is governed to a large extent by the condition of the fruit, and also the climatic conditions that have prevailed during the period of growth, especially just prior to harvesting.

It does not follow that one set of conditions for a particular variety of fruit will apply directly, each and every season, and this is where the skill and knowledge of the engineer play an important part. Bear in mind that commercial refrigeration is but half a century old, and it takes a long while to train experts capable of solving the many and varied problems that arise. It is a pleasure to know that definite progress is being made and difficulties gradually overcome, due mainly to the individual and collective efforts of a body of practical and scientific investigators who record their acquired knowledge for the benefit of those who seek it.

Much has been accomplished, but a far wider knowledge is still essential before that state of perfection is reached that will give complete satisfaction both to the store management and to the producer, and it is the duty of those vitally interested in these matters to assist wherever possible in their solution.

The world is moved in the first instance by those who see one side of a question only, although the services of those who see both are indispensable for effecting a settlement.

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Extract "BETTER FRUIT," U.S.A., February, 1934: "Idaho Spray Programme for Codlin Moth Control, 1934," by Dr. Claude Wakeland, Department of Entomology, University of Idaho. Experiments in the State for the past six years have shown that **LEAD ARSENATE** is the best, as well as the most economical insecticide that we have tested for Codlin Moth control. Entomologists are agreed that there is no substitute for Lead Arsenate that can be recommended to the public.

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New Zealand News and Notes

N.S.W. Delegation ∴ Crop Prospects

(By Our Correspondent.)

THE New South Wales Citrus Delegation completed their New Zealand mission, and sailed for Sydney by the "Awatea" in early October. It was not to be expected that immediate results would follow the work done by this deputation. The New South Wales growers are to be congratulated in making an attempt themselves to remove an embargo which is of no value to either Australia or New Zealand except possibly as a bargaining point between the Governments concerned. The delegation, during their short stay in New Zealand, were very busily occupied in interviewing Ministers of the Crown, Members of Parliament, trade organisations, social societies, public institutions, and wherever they went they received a very sympathetic hearing.

New South Wales fruitgrowers should not delude themselves that the job is finished; it is not, but the recent deputation laid a foundation, they set a high standard, and the work will have to be followed up if the effort is to ultimately succeed. Already there is an indication that fresh interest has been aroused in Government circles, and it is only necessary for the New Zealand public to insist on an ample supply of Oranges at a reasonable figure, and the New Zealand Government would have to take some steps to ensure this being made available. Potatoes seem to be the stumbling block, and why the Federal Government is worrying so much about giving New Zealand a Potato quota is not understood by the business circles of New Zealand.

The present price of Potatoes in New Zealand would prohibit shipment to Sydney, and as an alternative export market has been found in South America, there is in the meantime no great enthusiasm about the Sydney market among New Zealand shippers. It is obvious that the Federal Government would be perfectly safe in giving a quota of 10,000 to 20,000 tons, but it is questionable whether anything like that quantity would ever be shipped in any one season. The same position applies with New Zealand Apples to Sydney. They have to bring such high prices and must of necessity cater for a luxury market that quantities likely to go forward are strictly limited.

Those responsible for completing any trade treaties would be well advised to get right down to tin tacks, and they would find that the difficulties which they at present foresee are almost non-existent. There is no need for South Australia to worry, they would still secure a large portion of the South Island trade, and, having established a good reputation for their Navels throughout New Zealand, would maintain a large portion of that trade even in face of strong competition from cheaper New South Wales fruit. Speaking generally, the New Zealander is prepared to pay good prices for a good article.

General Heane and Colonel Herrod spent a few days in the Auckland Province meeting citrus growers. They found the visit instructive and they return to Australia with a much better

idea of the possibilities of development in Orange production in the northern parts of New Zealand.

From personal contact with the work of the delegates in New Zealand we can say that the New South Wales and Victorian citrus growers will never fully appreciate the efforts made by this recent deputation to reopen the New Zealand market. Everyone who works for co-operative organisations knows that appreciation must not be expected—if it is, disappointment will be the result. Perhaps we can say, "Thanks," if only for the good work done by the deputation for the New Zealand public, who want New South Wales and Victorian fruit, but cannot get it. We will leave the New South Wales growers to speak for themselves.

Fruit Export.

The Apple exporter is no further ahead than he was four weeks ago, whereas the 1937 season is that much nearer. Exporters have been expecting an announcement regarding the Government's policy, particularly as the Hon. W. Nash, Minister of Finance and Markets, was due to leave on a mission to England. He has now sailed, and still no announcement, and the fruit exporter must be really starting to wonder whether the Government, after inflicting considerable increase in charges, intends to leave him to carry the whole burden. The future remains obscure, and although a lighter American crop may have an influence on the 1937 export prices, it is too much to expect that the fruit exporter can carry all his burdens unaided. Evidently the Government still intend to take over the fruit export trade under the Marketing Department in 1938, but 1937 has first to be negotiated, to say nothing of losses sustained in 1936.

The London Representative of the New Zealand Fruit Board, Mr. H. Turner, returns to New Zealand on a visit during the present month. Mr. Turner has gone through a difficult marketing season; however, that is not likely to stop exporters asking all sorts of awkward questions during his visits to the districts. Undoubtedly poor condition has affected the price returns for 1936. This is to be ex-

pected in the handling of a perishable product such as fruit, but it is very hard to explain to shippers that their particular fruit showed deterioration.

Crops.

It is early yet to forecast the crops for 1937, but at the moment it seems that New Zealand will experience a good medium crop, heavy in places, with some varieties in some localities with only a light showing. Delicious are reported as being light in some districts, although this particular variety in the early growing stages often looks light when it is not.

The doubt regarding the Government's policy is responsible for some growers becoming lax in their spraying programmes, and the result will be apparent about harvest time.

Good results may be secured for the early varieties, because of the Coronation ceremonies in England.

Labour Legislation.

The suggestion of a minimum wage for orchard hands of about 16/- per day is causing plenty of anxiety in fruit producing circles. The industry is in the position that it cannot possibly meet such a demand without verging on bankruptcy, and even though conditions were normal, such a suggestion would only hasten the installation of labor-saving devices designed to keep the Labor bill at some reasonable level. The orchard employee under such conditions must be the loser. There will be a tendency to convert permanent labor into casual. An Orchard Employers' Federation has been formed, and we understand the response has been good, and active committees are working in the respective areas.

Fruit Enquiry.

The taking of evidence is almost completed and then the real work of the Commission will begin. It is to be hoped that the Commission recommend little or no disturbance of the existing trade channels. It is all very well to develop schemes, but it is another thing to put them into practice, and while present channels may not be perfect, it is better to improve on what already exists than to institute something new. In our opinion the simple remedy is not only the safest, but the best, and we would suggest that rather than spend a lot of money in creating a new organisation, the money be devoted to an education campaign designed to increase the consumption of fruit, and for the markets to be assisted at the same time by the total elimination of the rubbish which at present represents almost 25 per cent., at least, of the

fruit sold (or perhaps we should say, given away) within the country. There would be no spectacular result,—that cannot be expected, irrespective of what scheme is introduced. Consumption at present is comparatively low, there is room for considerable expansion, and it is only by a well-conducted advertising campaign, backed by substantial funds, that sales can be improved for the benefit of the grower, wholesaler, and retailer. It may be necessary to exercise some control over the hawking trade—that is a Departmental matter. Certainly control on quality is needed in the markets—that also is a Departmental matter. Distribution will take care of itself if quality is backed by an advertising campaign, and the normal channels of business function as usual.

As the result of heavy frost in the Hawke's Bay district on the night of October 14, fruitgrowers of that area have suffered a very severe loss. There is always a tendency to exaggerate frost damage, but in this case it would seem that the early reports of the clean up are fairly reliable. All stone fruit and Pears are reported as being not more than a 10 per cent. crop, and the losses on Apples vary from 50 per cent. to 100 per cent. With frost such as this, even the fruit which is left will be showing traces of frost damage, and the report from the Departmental Officer that the Hawke's Bay export for 1937 will be nil, is probably fairly correct.

The effect on the New Zealand export crop will be more apparent in Pears than in Apples. Other districts in N.Z. are carrying full crops, and although the absence of Hawke's Bay fruit on the New Zealand market will have a tendency to attract fruit which would otherwise be exported, at the moment we incline to the opinion that the Apple export quantities will be little short of normal. The Otago district, which had a very light crop last year will, subject to freedom from frost, probably export a record quantity for 1937.

As the result of the frost damage in Hawke's Bay, a meeting of growers was held the following night, with the result that 300 growers attended. This alone goes to show the severity of the visitation, and the serious view being taken by those concerned. A Committee of Ways and Means has been set up.

The Alexandra district in Otago, which is mainly a stone fruit area, experienced a 14 degrees frost on the ground, but as the majority of the large growers in that area are well equipped with fire pots, the extent of the damage will probably be limited.

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Australian Fruit Interests Visit New Zealand

Representatives Well Received—Embargo May Be Lifted

The following interesting report on his recent visit to New Zealand was submitted to a meeting of the N.S.W. Chamber of Fruit and Vegetable Industries on October 14, by the Secretary (Mr. P. S. Macdermott). The visit was sponsored by the Chamber, which met all expenses incurred on the trip by Mr. Macdermott.

As a result of the visit, there is every reason to believe that the embargo will be lifted, as the Fruit-growers' Federation of N.Z. offer no objection, and the retailers' associations are bitterly opposed to its continuance. Dominion consumers, states Mr. Macdermott, were hungering for cheap Oranges. Retail prices ranged from 1/6 to 5/- per dozen, while Mandarins were also unprocurable.

Mr. Macdermott's report states that the trip to New Zealand was made with two objects; firstly to give evidence before the Committee of Enquiry into Fruit Marketing in New Zealand, which committee was set up by the N.Z. Government, and secondly to do everything possible while in New Zealand to have the existing embargo on N.S.W. fresh fruits and vegetables removed or amended.

Arrived in Wellington about noon on September 14, 1936, and spent most of that afternoon with Mr. R. H. Nesbitt, Australian Trade Commissioner, obtaining information in regard to the Ministers, Departmental officials, and all other persons with whom it was desirable to contact. A programme of work for the time to be spent in Wellington was roughly drawn up, and interviews arranged by Mr. Nesbitt per phone for the succeeding days. I must express my very deep appreciation of the cordial manner in which I was received in every quarter during my stay in the Dominion.

Mr. Nesbitt, who was leaving Wellington next day for about a week, offered the use of his office and staff of four, and this was gladly availed of. His assistance, particularly in making appointments with Ministers, and introducing us, was most valuable. The N.Z. Fruitgrowers' Federation, the N.Z. Fruit Export Control Board, and Mr. H. E. Napier, also kindly offered the use of their offices and staff, and with the heavy programme of work it was found necessary to call on both the Fruitgrowers' Federation and H.

E. Napier's staffs to assist us in addition to the Trade Commissioner's staff.

At all times care was taken to point out that the N.S.W. industry agreed that N.Z. should protect its own growers and those of the Cook and other Islands. The position of N.S.W. as the largest citrus producing State in the Commonwealth was emphasised and attention drawn to the prices at which N.S.W. Oranges and Mandarins could be landed in N.Z., as compared to the values ruling there at present. The political difficulties in Australia in regard to the entry of N.Z. Potatoes were also explained on every occasion.

Every opportunity was taken of obtaining newspaper publicity, and appreciation of the courtesy of the press in this connection must be expressed. It was found that the N.Z. consumer was hungering for Oranges. Retail prices were high, ranging from 1/6 to 5/- per dozen, while Mandarins were almost unprocurable, a few South Australians only being available at from 2/- to 3/- per dozen.

South Australian Oranges sold in Wellington at the Wholesale Fruit Market during the time I was there at fixed prices of 18/6 to 23/- per export case, according to size, and Mandarins sold at auction from 46/- to 63/- per export case.

Supplies were not nearly sufficient for requirements, and retailers could not obtain 20 per cent. of their orders. Each shipment is booked up ahead, and is sold before arrival at the prices fixed by the S.A. Representative. No Oranges at all were available in the wholesale market on 28/9/36, and a shipment of 200 cases of Island Oranges sent down from Auckland, and which arrived on 29/9/36 was sold at auction for 42/- per case.

The Committee of Enquiry consisted of:—Mr. A. Coleman, Barrister of Law, Chairman; Mr. J. A. Campbell, Director of Horticulture; Mr. J. E. Thomas, accountant, Dept. of Industries and Commerce; and sat in Wellington on 23rd to 25th, and again on September 28, 1936. We were most cordially received by them and the whole of the morning of the 23rd reserved to hear our evidence. Two cases had been drawn up by us as per copies attached, and many questions were asked by the Chairman to which we were able to reply.

After this was completed, the Chairman pointed out that the terms of reference did not allow them to report on the question of the Embargo, but that it was possible that the Minister for Industries and Commerce might ask for some report at a later date, and he would therefore like to hear us on this matter. We accordingly stated the case for N.S.W., after which he and Mr. Campbell asked various questions, and the Chairman asked me if I could advise him of the loss of freights resulting from the Embargo. I did not have this information at hand, but promised to obtain it, which I did, and supplied to him later, as also the cost of packing and shipping Oranges and Mandarins.

I also had the opportunity of addressing the Wellington Branch of the Plunket Society, and pointed out the position as it exists, whereby N.S.W. could supply all N.Z. requirements at reasonable values. Contacts were made with various Union officials as per list, and also the official organ of the Labor Party, "The Standard," which was featuring the position of its issue of 6/10/36.

A courtesy call was made on the Prime Minister, the Hon. M. J. Savage, and official calls on Hon. P. Fraser, Minister for Health, Minister for Education, Minister for Marine and Deputy Leader; Hon. W. Nash, Minister for Finance, Minister for Customs; Hon. D. G. Sullivan, Minister for Industries and Commerce; Hon. W. Lee Martin, Minister of Agriculture.

In all cases we were splendidly received, and allowed to fully state our case, except that Mr. Sullivan would not allow us to touch on any matter that affected the policy of the Government.

All Ministers admitted that the present position was most unsatisfactory.

Mr. Nash, the Minister most vitally concerned, informed us that he had laid down a programme of work and that this entailed him first of all dealing with Trade Agreements with the U.K., and that he was leaving next week for England to deal with these. On completion in about seven months time it was his intention to return via Australia and adjust the trade matters with the Commonwealth, and that the Embargo would then be dealt with.

I asked if it was not possible to have the Embargo on fruit divorced from other trade matters, and dealt with at once. Mr. Nash would not promise to do this, but said he would discuss the question with Sir Archdale Parkhill that night. He advised that the Government had given an assurance to the importers of Jamaican fruit that they would be protected,

and he must carefully watch his position. He agreed that it was not the Government's policy to allow merchants to make excessive profits. I can say, however, that if Australia is prepared to offer some quid pro quo to N.Z. there is quite a possibility of something being done that would allow of some relaxation of the present Embargo in the immediate future. At the same time there are political difficulties in the way of this offer being made by Australia.

It certainly would appear from all our conversations with Ministers and others that the questions of the Fruit Fly and the Potato Scab are both looked on more or less as bogeys.

THE ATTITUDE OF THE FRUIT-GROWERS IN NEW ZEALAND IS MOST FAVORABLE, AND NO OBJECTION WOULD BE RAISED BY THE FEDERATION TO THE LIFTING OF THE EMBARGO.

THE RETAILERS' ASSOCIATIONS THROUGHOUT N.Z. ARE BITTERLY OPPOSED TO THE EMBARGO, AND THE WELLINGTON BRANCH GAVE EVIDENCE THAT THE EMBARGO ON AUSTRALIAN FRESH FRUITS HAD MEANT A REDUCTION IN THE SALE OF LOCALLY-GROWN FRUIT.

A complete statement of the case for entry of N.S.W. Oranges and Mandarins was prepared, and arrangements made through the United Press Association for its publication in the whole of the press of N.Z., and total of 58 papers. Copies were also distributed to the Plunket Society, all Unions, and a number of interested parties in N.Z.

P. S. MACDERMOTT.

Sydney, 8/10/36.

N.Z. Fruit-Export Board

Tenth Annual Report.

An interesting sidelight upon the fruit industry in New Zealand is provided in the tenth annual report of the Fruit-Export Control Board, just received. The report covers 13 months up to December 31, 1935, and was presented at the annual conference in Wellington at the end of July. It gives a full and detailed review of the Board's activities for 1935.

Export Quantities.

Owing to a light yield, shipping strikes, drought and other unforeseen circumstances, export was 400,000 tons below early expectations, and totalled only 924,000 cases in 1935, but, in spite of storm damage in the Northern Island, the 1936 exports reached 1,159,876 cases.

Owing to the rapid increase in production of Apples and Pears in the Argentine, New Zealand has lost a market which she has enjoyed for some time, and the report states that other outlets must be found to absorb this exportable quantity.

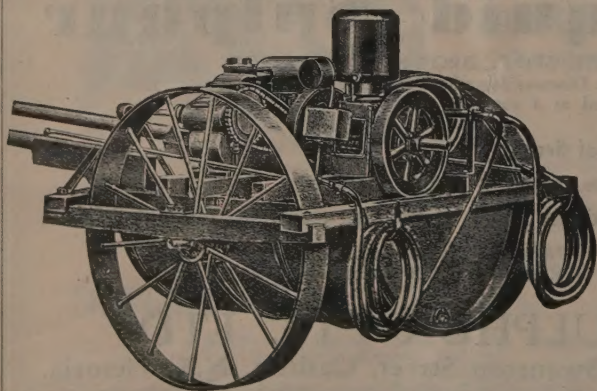
Fortunately, export to the East, which in 1935 only amounted to 1,000 cases, increased to 7,641 cases, and more could have been shipped had space been available. It is hoped to arrange suitable shipping facilities so that this market can be developed.

Average C.I.F. Prices.

A graph supplied in the report gives the fluctuations of Apple and Pear realisations since 1934, and shows that, whereas 1925 realised approximately 12/9 per case, and 1927 reached a peak at 14/-, a downward drop fell to 13/- in 1929 and as low as 9/4 in 1932. Fortunately a slow upward movement

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began, and 1935 closed with the highest prices since 1930, at 11/5 per case (N.Z. currency).

Publicity Assists.

The Board is convinced that its publicity quota is being wisely spent, and that satisfactory results can be reported. Personal interviews with retailers all over Great Britain are periodically undertaken, and posters, window cards and other forms of printed publicity matter are distributed. A few stands were taken in large exhibition halls and shows, and press advertising was also used. School competitions and window dressing were other features resorted to.

Research.

The Board approves of and is assisting in research work, specifically as relating to the transport and storage of fruit. Departmental officers have been sent to England to check on the work being done, and to study the results being discovered with gas storage.

Varieties Exported.

Altogether 28 varieties of Pears and 43 varieties of Apples have been exported in larger or smaller quantities. The largest proportions of the total export packs have been:—Apples: Sturmer (336,141 cases); Delicious (241,900); Jonathan (219,619), with Dougherty, C.O.P., Dunns and Statesman well down, others dropping to a few sample cases. In Pears, the four main varieties were:—Winter Nelis (36,025); Winter Cole (34,734); P. Barry (11,844); and Beurre Bosc (8,118), with others considerably less in quantity.

Finances.

The expenditure totalled £559,976, of which management expenses absorbed £4,703, Board meetings £879, Exchange £859, Freights £180,713, and payments to growers £277,276. On the receipts side the main items were:—Sale of fruit, £425,357; Exchange, £102,057; Government contribution to Guarantee Fund, £12,500, and marketing credits, £8,600.

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Australian Apple and Pear Export Council

ANNUAL CONFERENCE IN ADELAIDE — REDUCTION OF PEAR VARIETIES — MORE APPLES TO BE ELIMINATED — AUSTRALIAN MARKETING COMMITTEE TO BE SET UP.

THE ANNUAL CONFERENCE of the Australian Apple and Pear Export Council was held at the Grosvenor Hotel, Adelaide, from October 26 to 30, 1936.

There were present Mr. J. B. Mills, President, and the following delegates:—

Tasmania.—Messrs. J. H. Astell, D. Ryan, R. H. Thompson, L. Taylor, J. R. Abel, R. W. Humphreys, J. P. Piggott, C. H. Cane, A. J. Honey.

W. Australia.—Messrs. J. M. Martin, N. A. G. Brockman, H. W. Soot-hill, R. M. Carter, F. Simper.

Victoria.—Messrs. G. W. Brown, W. H. Carne, F. Moore, F. R. Mellor, J. W. Barker, A. Perry.

N.S.W.—Messrs. A. E. Herring and J. W. MacKenzie.

S. Aust.—Messrs. J. B. Randell and H. J. Bishop.

Queensland.—B. Flewell Smith.

Hon. Advisor.—H. G. Colombie.

Secretary.—R. E. Boardman.

In addition there were Government Officers in attendance:—Dept. of Commerce, Messrs. H. Thompson and E. Robinson; Tasmania, Messrs. S. H. Grueber, H. A. Turner, and E. A. J. Benjafield; N.S.W., Mr. C. G. Savage; Victoria, Mr. J. M. Ward; S. Australia, Mr. A. G. Strickland; Queensland, Mr. H. Barnes; W. Australia, Mr. G. W. Wickens.

Levy on All Fruit Exported.

Mr. Brown stated that the Commerce Department had put forward a suggestion that the 3d. levy be collected on all Apples and Pears exported—at present the levy was collected only on Apples and Pears ex-

ported to U.K. and Continent. Trade Agreements were liable to be affected because of discrimination. Of the 3d. levy, 1/16d. would go to the Council funds, and 1/16d. returned to the exporting States.

In answer to Mr. Carter, the Chairman stated that the Australian Overseas Trade Publicity Committee was in a position to expend its funds on advertising in the East as opportunity offered, and as requested by this Council.



Snapshot at Conference outing at Chateau Tanunda Vineyards.
Left to right.—Messrs. J. B. Mills, Oscar Seppelt, —, and H. J. Bishop.

Mr. Abel moved: "That the 3d. levy be collected on all Apples and Pears exported." Mr. Randell seconded. Carried.

Levy for 1937.

Mr. Brown moved: "That the levy for 1937 be 3d." Mr. Humphreys seconded. Carried.

Fruit Cases.

Mr. C. H. Tutton, by permission, addressed the Conference, and spoke of the "Crown" pack for Apples and Pears adopted by some of our competitors, by which could be guaran-

teed a weight of 48 lbs. in Pears, and 46 lbs. in Apples. He displayed photos showing these packs. The adoption of similar bulge packing and sending more fruit in the cases would mean the equivalent of a reduction in freight of 15 per cent. from Tasmania, and 10 per cent. from the mainland.

After full discussion re extra length of lids to allow for bulge, seasonal conditions in 1936 causing greater shrinkage, over ventilation of ships holds, the desire to do away with

slack packing, inevitable alteration to the grading regulations to provide for "crown" packing (under which system different sized fruit is used in the cases), etc., Mr. Ryan moved: "That the size of the dump case be increased to 18 x 14½ x 9 in. Mr. Thompson seconded, and the motion was lost by 5 votes to 6.

Mr. Thomson (Dept. of Commerce) said the Commonwealth and Tasmanian Governments had sent Mr. P. H. Thomas to U.S.A. to enquire into the case question, among other matters. At a meeting of State Supervising Officers it had been de-

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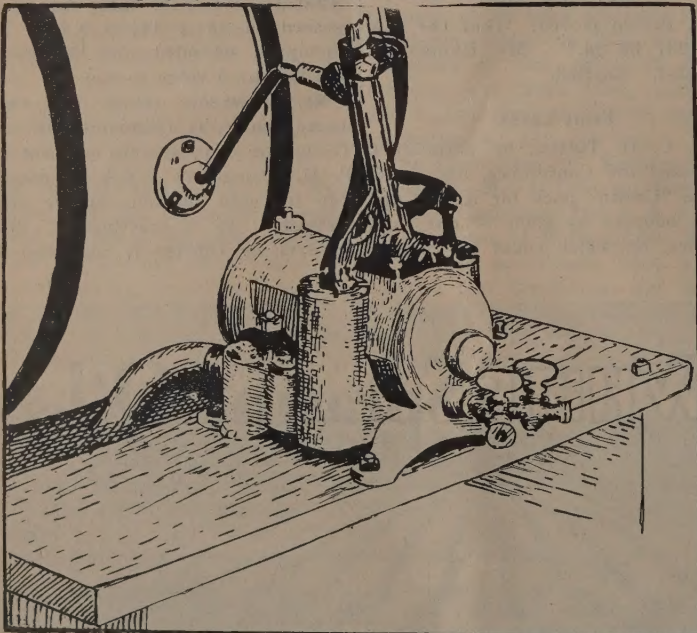
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cided to recommend that this matter as to the most suitable fruit case be deferred until the return of Mr. Thomas.

After further discussion Mr. Brown moved: "That the internal measurement of the dump cases be altered to allow of a variation in the internal width of from 8-2/3 in. to 9 in. Mr. Astell seconded. The motion was carried.

Official Opening.

The President introduced Hon. A. P. Blesing, Minister for Agriculture.

The Minister, in opening, referred favorably to the effective work of the Australian Apple and Pear Export Council. He hoped that the good work done for the export trade would be continued as regards local marketing, and understood that an advertising campaign was contemplated.

A vote of thanks to the Minister was carried on the motion of Messrs. Brown and Astell.

Imperial Conference, 1937.

Mr. Astell moved:

"That this Council agree to be represented at the 1937 Empire Conference, and that the present President, Mr. J. B. Mills, be appointed the delegate." Mr. Humphreys seconded. Carried—with applause.

In response, Mr. Mills said he appreciated the honor, and would do his best to serve the industry, as he had done at Ottawa.

Claims.

Mr. Colombie gave details of five claims pending on last season's shipments. Owing to the method of signing certificates in Australia, the certificates issued here were not accepted as evidence in English Courts.

He moved: "That the Federal Government be requested to take, immediately, any necessary action to ensure that Export certificates for Apples and Pears be admissible as evidence in Australian, and consequently in British and Foreign Courts of Law."

Mr. Thomson (Dept. of Commerce) said that this matter was being taken up by the Commonwealth Legal Advisers. Certificates were now signed "for" the Examining Officer, and that appeared to be the trouble, but it was certainly impossible for the Examining Officer to personally sign the certificates, as this duty would alone take up his whole time.

Mr. Colombie pointed out the necessity for the utmost urgency for the necessary legislation or regulations to be passed, whereby the Export Certificates of Inspection issued by its responsible officers should be admissible as evidence in Courts of Law, the urgency being due to the necessity to supply overseas traders with valid documents that would enable them to continue before next March the prosecution of pending claims against certain steamers for delivering overseas fruit in faulty condition, which officers of the Government had testified by the certificates was delivered to the steamers in Australia in perfect condition.

Committees.

It was decided on the motion of Messrs. Cane and Carter to set up

Committees to deal with certain items on the agenda re (a) Apples, (b) Pears. The Committees were as follows:—

Apples.—Messrs. Brockman, Simper, Abel, Thompson, Randell, MacKenzie, and Carne (with power to add), and Departmental Officers.

Pears.—Messrs. Moore, Perry, Her-ring, Ryan, Martin, Bishop, Humphreys (with power to add) and Departmental Officers. At the request of Mr. Moore it was decided that questions relating to Plums be dealt with by the Pear Committee.

Trade Treaties.

Mr. J. W. Barker said that the German market to the extent of 14 million bushels annually had been lost to Australia. Germany last season was buying Chilean Apples of a lesser quality than Australian, at prices between 15/9 to 28/10 (in the equivalent of Australian currency).

He moved: "The urgent necessity for regaining, and increasing, the outlets for Apples and Pears on the European Continent, especially Germany and Denmark, be urged upon the Government, with a request that every possible effort be made to ensure this result."

Mr. Colombie pointed out that U.S.A. was making trade treaties with foreign countries, and was getting reciprocal business, and requested that these facts be mentioned in the covering letter.

Mr. Thomson said that trade agreements were now being negotiated with certain countries; one agreement that was under review specially mentioned Apples, and the country concerned stipulated that an authoritative certificate be issued showing the picking dates of the Apples, and that the fruit be marketed within three months of picking. Consideration was being given to the practical matters involved.

Wednesday, October 28, 1936.

Mr. Mills presided, and called on the Chairman of the Pear Committee (Mr. Moore) to present the report of the Pear Committee.

Mr. Moore reported as follows:—The following varieties of Pears are recommended for export:—

Variety.	Abbreviation.
B. Hardy	Same
B. Anjou	Same
B. Bosc.	Same
D. de Comice	Comice
Josephine	Jos.
Packhams Triumph	Packham
Winter Cole	W. Cole
Winter Nelis	W. Nelis
Madam Cole	M. Cole
Glou Morceau	G. Morceau

The following varieties of Pears shall be permitted export during 1937, and thereafter may be prohibited:—

Black Achan	B. Achan
Broom Park	B. Park
B. Clairgeau	Clairgeau

The following varieties of Pears shall be placed on a danger list. They may be exported during the next two years, after which period the list will be reviewed:—

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CENT. 3030.



Delegates and visitors to Apple & Pear Export Council's Annual Conference.

Growers are warned that any of these varieties may be retained on the list, or prohibited from export:—

Two Year List.

Variety.	Abbreviation.
Gibbins Seedling	Giblin
Duchess d'Angouleme	D. D. Ang.
B. Britton	B. Britton
Easter Beurre	B. Easter
Williams Bon Chretien	W.B.C.
D. Bossuch	Bossuch
Howell	Howell
Keiffer	Keiffer
Vicar of Winkfield (or Napoleon)	Vicar
Marie Louise	M. Louise
Winter Bartlett	W. Bart.

The list of Pears for U.K. and Continent:—

- (a) Recommended for export;
- (b) Those recommended for export up to the 1937 season only;
- (c) Those on the "danger" list.

be published in the press in the several States, and that subject to no protest being received by a given date from growers who might be deemed to suffer hardship, the Council be authorised to submit to the Department of Commerce the foregoing lists for gazettal for export, i.e., all other varieties not listed to be prohibited from export.

Report adopted on the motion of Messrs. Moore and Ryan.

Uniform Packing Charts.

Mr. Moore moved: "That Conference request the Department of Commerce to co-operate with Mr. Krone, of the Victorian Department of Agriculture, with a view to preparing Uniform Packing Charts for the:—Canadian Apple Case; Standard Pear Case; Long Bushel Pear Case; and make same available for educational purposes." Carried.

Counts Instead of Sizes.

Mr. Moore moved: "That Conference recommend that all growers of export Pears use counts on cases, rather than sizes." Carried.

Mr. Carne's Report.

Mr. Moore moved: "That Mr. W. M. Carne's report be received, and that consideration of his recommendations be deferred until such time as Mr. Thomas has returned from America and submitted to this Council the results of his investigations.

"To do otherwise would mean that a completely new set of regulations would have to be prepared if Mr. Carne's suggestions were to be adopted." Carried.

Russet Tolerance.

Mr. Moore moved: "That the following varieties of Pears be described as normally clean-skinned varieties:—Beurre Hardy, Beurre D'Anjou, Doyenne de Comice, Josephine, Packhams Triumph, W.B.C., Howell and that they be permitted to carry the following percentage of russet:—Extra Fancy, 15 per cent.; Fancy, 30 per cent.

"No Russett restrictions shall apply to Pears shipped under 'Good' grade, or to those varieties not listed as clean-skinned varieties." Carried.

Plums.

Mr. Moore moved: "That the regulations be amended so that wrapping of Plums be optional, and that there be no restrictions as to varieties desired to be exported, for the time being, owing to experiments still being carried out." Carried.

On the motion of Mr. Astell, seconded by the Chairman, a hearty vote of appreciation was carried with applause to the Pear Committee.

Error in Export Regulations.

Mr. Taylor directed attention to an error in the printed Commonwealth Export Regulations:—

The Regulations provided for a tolerance of 5 per cent. of $\frac{1}{4}$ -in. blemishes in the "Fancy" grade in Apples, the same provisions were not mentioned in the "Fancy" grade for Pears, and it was decided to direct the attention of the Department of Commerce to this matter.

Pears for Eastern Markets.

Mr. MacKenzie moved: "That Pears be permitted export to the East in the Standard Bushel case." Carried.

The Australian Fruit Market.

Mr. Taylor moved: "That the report of the Apple and Pear Grading Conference, held at Sydney in July, which had been circulated, be taken as read and received."

In reply to Mr. Piggott, the Chairman stated that this did not involve the adoption of the report. Mr. Ward and Mr. Savage stated that the regulations as decided at the Sydney Conference had been drafted, and were about to be gazetted. Mr. Piggott urged more common sense interpretations of the grading regulations at Sydney regarding Interstate Apples.

The Chairman traced the activities of the Council in giving a lead to the developments for improvements in marketing Apples and Pears in

Australia. A publicity campaign should lift the consumption from one and a half to two million bushels, which would improve both export and local trade. The resolution was carried.

Federal Excise.

Mr. Moore moved: "That the Apple and Pear Export Council be authorised to approach the Federal Government requesting that an excise be collected on all Apples and Pears sold in Australia, or submitted for export, in order to raise funds for maintaining and developing the industry, and particularly for the purpose of publicity to increase Australian consumption of these fruits, and the by-products of these fruits."

He explained that an excise of $\frac{1}{4}$ d. per case would yield approximately £27,000. Funds raised in S.A. and W.A. could be returned to those States if desired for publicity purposes there. Funds raised in the Eastern States could be spent in Victoria, N.S.W., and Queensland. Export markets appeared to be contracting and no co-ordinated effort had been made to develop the Australian market, the importance of which could not be over emphasised.

Mr. Piggott gave instances of effective publicity for Apples, and supported the proposal for publicity, but asked for further details as to the projected programme.

A full discussion followed, in which were mentioned matters such as elimination of collecting the excise (or stamp tax) on export fruit, elimination of canning Pears, the publicity for grades, and not Apples and Pears generally. Mr. Soothill gave particulars of successful Apple publicity in W.A.

Australian Market Committee.

Mr. Astell moved: "That a sub-committee be appointed to consider Mr. Moore's resolution," and the following were appointed:—Messrs. Thompson, Ryan, Moore, Brown, Randell, Herring, Soothill and Flewell-Smith.

Apple Committee's Report.

The report of the Apple Committee was submitted by Mr. Randell. He moved: "That the color grading of Jonathans remain as at present, viz.:—Extra Fancy 50 per cent., Fancy 20 per cent." "With regard to Mr. W. W. Carne's report as to reddish brown color in Jonathans, that the interpretation of color grading

for Jonathans to remain as at present to be characteristic of the variety. That no alterations be made to color grading in regard to any variety."

Mr. Martin, in seconding, said that W.A. would withdraw from the agenda the proposal that the percentage of color in Fancy Jonathans be raised to 30 per cent. Carried.

Varieties Prohibited in 1938.

Mr. Randell moved: "That this Council advise growers that the export of the following varieties be prohibited after 1938:—Alexander, Australian Beauty, Crow Egg, Reinette du Canada, Ribston Pippin, Jubilee, Pomme de Neige, Gregory Pomeroy, Aromatic, Ballarat (Stewarts Seedlings), Nickajack, Schroeder, Coleman, Mobb's Codlin, Stayman, Willie Sharp." Carried.

Mr. Randell further reported that the Apple Committee recommended:—That for French Crab the smallest size allowed for export be $2\frac{1}{2}$ in.

C.O.P.—That nothing larger than $2\frac{1}{2}$ in. be allowed to be exported.

That export be permitted to countries other than U.K. and Continent: Granny Smith, Delicious, Democrat, from $2\frac{1}{4}$ in. to $3\frac{1}{4}$ in.; French Crab, $2\frac{1}{4}$ in. to 3 in.

(The foregoing to be added to the present list.)

Adoption moved by Mr. Abel and carried.

Maturity.

Regarding items on the agenda relative to maturity, Mr. Randell moved: "That Inspectors pay particular attention to the question of immature fruit submitted for export." Carried.

Mr. Martin moved: "That henceforth the variety Stewarts Seedling go under the denomination "Ballarat." Carried.

Mr. Randell moved: "That color requirements be eliminated in regard to the Prince Alfred variety." Carried.

Mr. Randell moved: "That in Part 2 of the Schedule of the Apple Export Regulations the words 'or a destination reached by way of the United Kingdom' be eliminated." Carried.

Marking Trade Descriptions.

Mr. Randell reported that an item had been submitted from the Conference of the State Supervising Officers:—"That a uniform system of stencilling trade descriptions be adopted in a manner satisfactory to the Department of Commerce." He moved that the recommendation be adopted.

Mr. Thomson (Dept. of Commerce) displayed specimens of stencilling which was desired for uniformity. Mr. Taylor pointed out that some growers had machines for stencilling, and he hoped these machines would not have to be scrapped. Mr. Astell commended the adoption of a uniform stencilling system in place of the present lack of uniformity. He was sure the Department would deal with this matter reasonably. Carried.

Mr. Thomson (Dept. of Commerce) said that at the Conference of State Supervising Officers it had been decided to submit the following to the Council:—

"That the minimum number of cases permitted to be exported of any one variety shall be ten cases."

In the discussion, instances were quoted where this could inflict hardship if made compulsory. On the motion of Messrs. Astell and Carter it was decided to approve of the principle as an educational measure, but not to be made compulsory.

Mr. Thomson further reported that at the S.S.O.'s Conference it had been decided to recommend that the 10 per cent. blemish tolerance be reduced to 3 per cent. Mr. Abel considered that a pack providing only 3 per cent. for human error was not commercial. Mr. G. W. Wickens (W.A.) said the idea was to prevent the deliberate packing up to the 10 per cent. tolerance. Mr. R. H. Thompson asked that in future items of this character be submitted earlier, so that they could be placed on the agenda paper for discussion at State Associations prior to the Conference. Proposal not adopted. Mr. Brown moved a hearty vote of thanks to the Apple Committee. Carried with applause.

Federal Grants.

Mr. Moore reported that with regard to the 1935 grant, the action of the Government in reducing the £100,000 grant by £20,000 for research purposes was regretted by most States. He understood the Grant was in lieu of freight reduction. The Research work which had been commenced, however, would lose its value if not continued. He moved:

"That a request be made to the Federal Government to continue the research work already started."

In the discussion it was pointed out that the request for a research grant might lead to a reduction of the amount to be paid to growers to the extent of such research grant. With the consent of his seconder, Mr. Moore withdrew his motion.

In answer to Mr. Ryan, the Chairman gave details of the visit to Canberra, when the request was made to the Government for a Grant to cover some of the losses on last season's export. Those in attendance were Messrs. Mills, C. O. Smith, and Taylor. Carefully checked figures showed a loss of 2/10 per case on consignment fruit. A grant of 1/- a case had been requested. The increase of the grant of 4d. in 1935 to 4½d. in 1936 was totally inadequate. The ½d. increase was an indignity. The efforts since of Senator J. B. Hayes were esteemed. At the instance of the Tasmanian State Fruit Board a request had been made for an additional £50,000 to be distributed among those who had shipped fruit on consignment.

Mr. Piggott said the industry should stand firm in its request for £120,000 Grant in lieu of freight reduction—apart from any other assistance.

Mr. Ryan moved: "That the action of the President be confirmed in requesting the Federal Government to provide an additional £50,000 for distribution among those who exported Apples and Pears on consignment in the 1936 season." Carried.

Mr. Simper said that with regard to the method of supplying growers with data to enable them to claim the Federal Grant, W.A. shippers desired that a more simple form be used, or that they should in some way be remunerated for the labor involved in taking out the information required by the grower before he is able to make his application. Under the present his company had to supply the services of two clerks for four weeks to compile the necessary information. Mr. Carter supported. At the request of the Conference, Mr. Honey described the system operating in Tasmania. The W.A. proposal was withdrawn.

Shipping and Freights.

Mr. Brockman moved: "That being opposed to existing high freights, every effort be made by the Apple and Pear Export Council to secure a reduction." Carried.

Mr. Abel moved: "That the Government be asked through the Apple and Pear Export Council to insist on self-registering thermometers being installed on all boats carrying fruit." Carried.

Mr. R. H. Thompson introduced the subject of the consideration of the Fruit Freight Agreement. He quoted the high rate of freight compared with the value of the product (over twice as high as compared with beef and lamb); the undue time taken on the voyage (70 to 90 days), and said that many of the fruit-carrying boats last season were obsolete. The A.O.T.A. should include representation on the producing side.

The Chairman said that at A.O.T.A. meetings producers were in attendance, and on the State branches of A.O.T.A. there was full provision for grower representation.

Mr. Piggott said Tasmania had three grower representatives on the State A.O.T.A. These were capable of being appointed by the State Fruit Board. He offered to tender to the Tasmanian State Fruit Board his proxy as a voting member at the A.O.T.A., Sydney.

Mr. Colombie said that the fruit trade was asking for:—(1) Reduction of freight; (2) better service as regards length of time on the voyage; (3) elimination of bad carriers. He urged that the Red Sea route be resumed, as it had been suggested that ships would again go via Cape next season.

The Chairman stated application would be made to O.S.R.A. for lists showing the dates on which ships were due at destination. Mr. Astell said he understood the efforts to secure freight reductions were likely to be successful.

Marketing in Australia.

The chairman called on Mr. Brown (chairman of the Committee on the Marketing of Apples and Pears in Australia) to present the Committee's report.

Mr. Brown stated that the resolutions carried at the Committee meeting were:—

1. That this Committee endorse the principle enunciated at the Council meeting; that it should be a function of the Apple and

Pear Export Council to do all in its power to improve the consumption of Apples and Pears in the Commonwealth. Adopted on the motion of Messrs. Randell and Barker.

2. That the Apple and Pear Council be authorised, subject to endorsement by the Tasmanian State Fruit Board to approach the Federal Government requesting that a levy per case be collected on all Apples and Pears sold (other than for processing) for consumption in Australia in order to raise funds for maintaining and developing the scope of the industry and particularly for the purpose of publicity to increase the Australian consumption of these fruits and the by-products of these fruits. Adopted on the motion of Messrs. Moore and Astell.

3. The amount shall be ½d. per case or such lower amount as may be determined by the Council from time to time.—Carried.

4. Reduction of varieties for interstate trade—that this matter be approached by education rather than by regulation.—Carried.

5. With regard to the proposal listed from W.A.: "That the Commonwealth Government be urged as part of its assistance to the industry to provide the means of ensuring publicity with a view to improving consumption in Australia" the Committee recommended withdrawal as it was covered by resolution No. 2, and further to avoid any possible restriction of the major claims of the industry for direct assistance to the growers by way of the Federal Grant.

Mr. Martin said he would withdraw the item on this understanding.

6. It be a recommendation to the Executive that it constitute an Australian Market Committee with a view to improving the consumption of Apples and Pears within the Commonwealth and to co-ordinating and defining policy in connection therewith generally—

The Committee to be constituted from the Executive and from such other persons (including representatives of growers and distributors) as the Executive may determine.

The Committee to be authorised to co-operate with such other bodies and to create such sub-committees for State and other purposes as the Executive may agree and that the Executive consider what further steps may be desirable to ensure that the organisation of the Apple and Pear industry be rendered complete and effective.—Adopted on the motion of Messrs. Soothill and Brown.

In reply to Mr. Ryan, Mr. Brown stated that fruit for export was not included in resolution for per case levy for funds for Australian publicity campaign.

Shipments to U.K.

Mr. Simper raised the question of landing fruit in U.K. in a more orderly way, i.e., in the shipping programme for each State to be advised of the total quantity in each ship for the U.K. ports; the dates of loading

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at Australian ports and the approximate arrival dates at destination.

He moved that this matter be taken up with the tonnage Committee in Sydney.—Carried.

Co-ordinating Officer.

The Chairman introduced Mr. E. Robinson, who had been appointed as the Federal co-ordinating officer for fruit export. Mr. Robinson said his appointment was made during the past fruit export season and time did not permit visits to all the States. He had concentrated on examining the Victorian situation and included contact with Tasmania.

He dealt with the general good quality of the pack with regrets at the conscious attempts by a small section to export grossly inferior fruit. A problem in Victoria was the lack of facilities for examining fruit at Port Melbourne.

Representation on A.O.T.A.

The Chairman stated that as a result of earnest efforts, he anticipated improvements in the coming season.

Research Committees.

By permission of the Conference, Mr. H. N. Wicks (S.A.) spoke of the great benefits to growers which had followed the establishment of a Research Committee in the S. Australian Fruit Marketing Association. He urged other States to establish similar Committees, and that there be a co-ordinating panel to meet annually in conjunction with the Council.

Mr. Bishop moved: "That it be a recommendation that a growers' panel be formed in each State to consider problems relative to the growing of fruit, fruit diseases, etc."

In the discussion, the difficulties of the co-ordinating panel were mentioned.

Mr. Ryan said that Aromatic Variety of Apple was immune from black spot, yet when re-worked, the new variety was not immune. This suggested a line of study.

Mr. Colombie stated that varieties of Apples had varying vitamin qualities. This provided a wide field for scientific investigation. The motion was carried.

Eastern Trade Publicity.

Mr. MacKenzie moved: "That this Council requests the Australian Overseas Trade Publicity Committee to institute an advertising campaign in markets other than U.K. and Continent, particularly in view of the fact that increased competition is being experienced with South African, New Zealand and American fruit.—Carried.

Advertising in U.K.

The report by Mr. A. E. Hyland, London Director of Australian Overseas Trade Publicity, which had been circulated, was received on the motion of Messrs. Martin and Piggott.

Mr. Brown spoke appreciatively of the services of Mr. Hyland and his staff; but expressed the opinion that the publicity lost its effectiveness if the public could not identify the goods offered. The need was to reach the housewife when making purchases in retail shops. Fruit was usually displayed in the original boxes, but lost its identity when displayed. Advertising to the wholesale trade was less important, a small portion of the label was sufficient to indicate the source; labels should be designed bearing the mind the general advertising effect on the community. He

recommended (1) that the words "Australia" should be displayed in the boldest possible lettering on all case labels; (2) that all Apple and Pear wraps be printed with the word "Australia" or perhaps with a typically Australian design; (3) the inclusion in cases (when packed in Australia) of suitable price tickets displaying the word "Australia."

Mr. Moore stated he had noted that in accordance with the request of the Council, Australian Pears were now being more largely advertised, and he requested that this form of advertising should continue.

Visits to U.K.

Mr. Martin moved: "That this Council considers that it would be of material advantage to the Australian Apple and Pear industry for the respective State Supervising Officers to have first-hand and personal experience in the U.K. fruit markets (during the Australian fruit export season) of comparative arrival condition in those markets of fruit and packs from various countries, and urges the Commonwealth Government to take the steps necessary to give effect to this.

Mr. Thomson (Dept. of Commerce) stated that the Commonwealth's intention of arranging for official survey of U.K. outturns effectively covered this need.

The resolution was carried by nine votes to three (growers' votes).

Election of Officers.

Mr. Astell, in nominating Mr. J. B. Mills as President for the ensuing year, spoke appreciatively of his services.—Carried with applause.

Congratulations were expressed by Messrs. Martin, Brown, Thomson (Department of Commerce), Honey, Herring, Bishop, Flewell Smith and Piggott. Mr. Mills suitably responded.

Mr. Brown nominated Mr. Taylor as Vice-President.—Carried with applause. Mr. Taylor, in responding, stated he believed this Council was the best voluntary organisation of its kind in the Commonwealth.

It was decided on the motion of Messrs. Martin and Carter, the place and date of next conference be left to the Executive.

Trade With the East.

Mr. MacKenzie moved: "That a conference be held with the shipping companies catering for the Eastern markets with a request for a reduction in freight, more up-to-date methods of cool storing and less preference be given to other produce which has meant that only a proportion of orders can be shipped on some lines.—Carried.

Marketing in U.K.

Mr. Colombie directed attention to the recommendation of a previous Empire Fruit Conference that there be no further Apple plantings by Dominions until markets could be assured, yet according to a recent report, large plantings were going on in Nova Scotia. It was decided to ask Mr. Ross to direct the attention of the Empire Apple and Pear Council to this matter.

Mr. Colombie said he understood that in accordance with a decision of the Empire Fruit Conference, Australian Apples should not be sold in U.K. in September. Some traders loyally abided by this decision, but others did not. Mr. Brown said it



Delegates and visitors at the Chateau Tanunda Vineyards.

was an appreciated gesture on the part of those who ceased their sales of Australian Apples before September. The recommendation of the Conference had been that the arrival from Australia should not extend into August, but it had not been expected that subsequent sales should be restricted.

Council of Agriculture.

Referring to paragraph in the annual report on the subject of the Commonwealth Council of Agriculture. Mr. Soothill moved: "That the attention of the Agricultural Council be drawn to the fact that the Australian Apple and Pear Export Council exists with official Commonwealth recognition as a means of expression and co-ordination of the viewpoint of the industry in respect of many important phases throughout the States and will therefore appreciate the development of the fullest measure of co-ordination in approach by the two councils to all matters of common concern."—Carried.

Manure Subsidy.

Mr. Carne moved: "That a protest be entered against the reduction of the Federal Manure Subsidy from 15/- to 10/- per ton.—Carried.

Trade Improvements.

Mr. G. W. Brown addressed the Council on the subject of marketing Australian fruit in U.K. Owing to the fact of fruit coming from so many individual growers, there was a lack of standardisation and the long lines as from U.S.A., but stated, Australia could not be expected to follow this practice except partially and gradually. The effort should be for such standardisation and individual practices as to create a fuller general uniformity. Market conditions and growers support of methods of sale which are open to abuse have created an undesirable type of speculator, who should be eliminated. The business should be concentrated in the hands of substantial firms who are willing to submit their books to independent audit. Instead of provincial decentralisation, there should be concentration on the main markets and a standard contract was desirable.

Mr. Colombie said the Council had given much attention to—(a) Production, (b) transportation, but (c) marketing abroad was not yet effectively tackled. The idea of a panel of British receivers was before a previous meeting of the Council, but not completed.

In the discussion the importance of giving more attention to marketing in U.K. was stressed, also the advisability of educating and informing growers as to the need for concentration of the business into the hands of the reputable trade.

Sympathy With Mr. C. O. Smith.

The Chairman said a letter had been received from Mr. C. O. Smith,

regretting inability to attend because of illness. He moved that a letter of sympathy be sent to Mr. Smith, also expressing high appreciation of his services while Vice-President.

Seconded Mr. Piggott.—Carried.

Votes of thanks were tendered to the South Australian Fruit Marketing Association, the Commonwealth and State Officers attending the conference, to Messrs. Paterson and Co. Ltd., and Gerrard Wire Tying Co., for typing services; to Mr. G. W. Brown, the Chairman, and the Secretary.

Social Outing.

An enjoyable social outing was spent on Friday, October 30, when delegates were taken for an all-day picnic by motor. The glorious scenery was admired en route to the Chateau Tanunda Vineyard. Surprise was expressed at the extent of the vineyards for wine production. Luncheon at the Chateau Tanunda was enjoyed. Mr. Oscar Seppelt expressed his pleasure at the opportunity of entertaining visitors, which was some slight return for the hospitality showered upon South Australians visiting other States. After luncheon a visit was paid to Seppeltsfield, which was appreciated. The return journey being made to Adelaide through Angaston, and Williamstown.

There were 130 in the party. Keen appreciation was expressed.

Case-making in Adelaide.

A visit by a representative of the "Fruit World" to Holden's Body Building Works and Case-making plant was keenly enjoyed. Modern machinery was noted from all phases from the breaking down of the logs to the finished cases. Some three million cases are turned out annually for the various branches of the industry—dried fruits, canned fruits, Oranges, Apples, Pears, etc. Cases are also made as cheese containers, for confectionery, etc.

The layout of the factory is to provide for the work to be done in continuous lines, i.e., from the delivery of the timber to the finished product. The timber mostly used is hemlock. Messrs. Holdens have specialised in the manufacture of cases for the fruit industry.

At their motor body building works, the largest of the kind in the southern hemisphere, some 5,000 men are employed. Efficiency is the keynote of this enterprise, as revealed by the high quality of the products.

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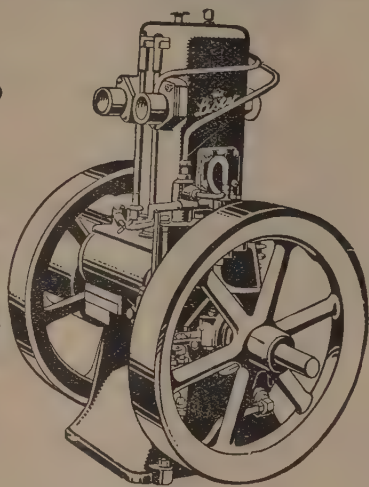
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HOBART

SOLE TASMANIAN AGENTS.



Interstate Conference of Fruitgrowers

Held at Adelaide, October 22 to 26

AN INTERSTATE CONFERENCE of Fruitgrowers, convened by the S.A. Fruitgrowers and Market Gardeners' Association, was held at the Grosvenor Hall, Adelaide, from October 22 to 26. The Conference was well attended by over 60 local and Interstate delegates. Unfortunately space will not permit verbatim reports of the many informative papers submitted and speeches made, some of which will appear in subsequent issues of "Fruit World."

Mr. B. Flewell-Smith, manager of the Committee of Direction, Queensland, gave a short address on the activities of the C.O.D. in Queensland.

Imparting Instructions.

More frequent use of wireless, as a means of imparting instructions and warnings to fruitgrowers, was advocated by the Chief Horticultural Instructor of South Australia (Mr. A. G. Strickland). He described the work of the horticultural branch in South Australia, which he said was one of the first established in the Commonwealth.

"The eradication of Codlin Moth," he said, "is perhaps our biggest problem to-day. It is nearly as bad to-day as it was in 1890, when it was responsible for the formation of my branch. I would suggest to growers that they make contact with the district advisers attached to my branch when they encounter any problem."

Detailing the work of instruction proceeding under the direction of his branch, Mr. Strickland said that results obtained from experimental plots on growers' properties had been astounding, especially in Currant culture.

Wireless, although used in other spheres, should play a large part in education and direction in future. He hoped that the Department would sponsor more talks for the purpose of giving growers warnings when certain pests made their appearance, and wireless could be used for making suggestions as to which sprays should be put on the trees.

"There is a definite need for extension of the research activities of the South Australian Horticultural Branch," said Mr. Strickland.

"The problem to-day is not what sort of fruit to grow, but which varieties we are going to cut out. Our export varieties will doubtless be reduced further as years go by. Many new methods have been introduced recently. You can now have bottle-fed trees, as well as bottle-fed babies.

Growers with a "Conscience."

Work being done in Western Australia in eradicating Codlin Moth was detailed by Mr. G. W. Wickens, Superintendent of Horticulture in that State. He said that the growers in Western Australia has a "conscience," which he thought did not exist anywhere else in the world. They told the Department as soon as any outbreak occurred, and so it was able to take prompt action. He attributed the eradication of disease in W.A. to that unique "conscience." It was by getting information early from the growers that Codlin Moth had been kept in control.

Fruit Packing Instruction.

Mr. J. M. Ward, Victorian Superintendent of Horticulture, spoke upon "Fruit Packing Instruction" as given in that State, and stated that this class of work was begun in 1919 in Tasmania, and was later put into operation by the late Mr. Rowlands, ably assisted by Mr. W. C. Page. Classes in State and other schools were introduced in Tasmania, Queensland and Victoria, stated Mr. Ward, because he was convinced that this method, though slow, was most solid and effective.

Apple-packing houses have been pleased to draft into their sheds young packers, who have received tuition in such classes, and to-day most of the packers in Victoria have received instruction from Departmental Officers. Trophies have been provided by both the Export Handling Committee and Gerrard Wire Tying Co., and competed for at the Melbourne Royal Shows. This has greatly assisted in improved packing and grading methods. Victorian growers have greatly appreciated the Department's co-operation in this way, in fact, the Department has been unable to comply with all the many requests to establish packing classes throughout the State.

It is essential, concluded Mr. Ward, that to obtain the best results, Head Masters in schools in which such classes are held shall be enthusiastic about this work, otherwise the best results are not obtained. He expressed appreciation for the assistance rendered by many growers, who provided facilities for conducting the classes.

Rise and Development of the Australian Fruit Industry.

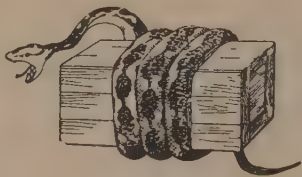
Mr. Boardman, in a paper submitted at the Conference, re-impressed the need for educating the public upon the value of fruit as a health medium. To this end a programme of advertising is essential; the people of Australia eat, on an average, only half an Apple per person per day. An "Eat More Fruit" campaign in England almost doubled the consumption of Apples, whilst similar increases were reported for other fruits.

Of the Australian average production of 10,000,000 bushels, about half are exported, therefore six million people only eat 5 million bushels in a year. If we could increase the home consumption to 1½ million bushels per annum it would stabilise the position here and also relieve the pressure on the exportable quantity, keeping export within the bounds of what would be reasonably profitable.

Marketing Research.

He suggested that much yet remains to be done in the way of marketing research by which maximum benefits could be obtained from any advertising programme.

The excellent work undertaken by the W.A. Apple Sales Board is a model in this connection. They have figures regarding the varieties grown, crop statistics, knowledge of the quantities of not only the fruits, but the varieties in store, rainfall records, particulars as to the keeping quality of the fruit, the absorptive



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power of the markets. Also an interesting sidelight on advertising was revealed when, in attempting to increase the sale of dessert Apples, it was found that the greatest consumption was for cooking Apples, thus indicating the direction of the spending power of the women. This is the type of information which is needed for our leading city, suburban and country markets.

Marketing research could be, and should be, put in hand at once, in fact, in acquiring the needed information, those advocating an educational Apple advertising campaign would have their hands greatly strengthened.

Another aspect of the fruit industry which is now showing sizeable proportions is that of pure fruit drinks. The good work which was inaugurated by the Chief Commissioner for Railways, Mr. Clapp, with regard to fresh Orange drinks is warmly esteemed. This indeed was a case of effective leadership.

Now it has been established that there is immense market for pure Apple drinks. This movement had its rise in one of the research meetings of the Victorian Fruit Marketing Association. The details which were presented were investigated, and finally the enterprise was taken up commercially and surprising quantities of the juice from cull Apples are now being sold.

I am firmly of the opinion, concluded Mr. Boardman, that this movement is capable of large development from an all-Australian standpoint. I believe the possibilities to be immense. To clear those lower-grade Apples off the market would be a veritable boon. The turning of such Apples into juice is a sound commercial proposition.

SOUTH AUSTRALIAN APPLE CROP PROSPECTS.

Apples generally are on the light side: this is the "off" year. Yet on the trees which suffered from frost a couple of seasons ago, the indications are for quite good crops, which will help to even up the average for the State.

PERSONAL.

Capt. A. W. Pearce, Australian Representative for the Port of London Authority, returned by the "Orion" on October 21, after a holiday trip abroad. While in England he covered 4,000 miles by car, and found the country districts more prosperous than they had been for many years. Wages were higher and cost of living much lower than previously. The increase in agriculture was most marked, the total area under crops and grass was 28,858,000 acres. Orchards now occupied 262,100 acres, and 59,800 acres were devoted to berry fruits. Fruit was now much cheaper to buy than formerly, and Peaches could be bought from 1½d. to 3d. each. Pineapples were no longer a luxury, and could be obtained at prices ranging from 1/- to 2/- each.

Mr. J. J. Mason, of the Sydney Fruit Markets, recently toured the North Coast districts of N.S.W. by car, and noticed that "bunchy top" had taken charge in several districts visited. Mr. Mason attended the local Government Association Conference at Lismore, and was much impressed by the prosperity apparent at this northern centre. He was enthusiastic regarding the scenic beauties of the North Coast, and intends visiting this country of mountain ranges and fertile valleys again when opportunity permits.

South Australia.

MID-MURRAY NOTES.

ORGANISATION — CENTENARY CELEBRATIONS — IRRIGATION — CROP PROSPECTS — SPRAYING.

(By Our Correspondent.)

Renmark, October 20, 1936.

PRODUCERS of dried fruits are closely watching the controversy raging over the forthcoming Referendum, and growers in the irrigation areas are preparing to put their weight behind the movement, in order to bring it to a successful issue. Why this Referendum should have created a major political stir, is hard to realise, as there are no additional powers sought beyond those which have already been accepted by all States before the adverse decision by the Privy Council on Section 92 of the Constitution.

The dried fruits industry has developed a highly organised marketing scheme since its inception, and during the past twelve years it has worked under Section 92, in which every distributing agency has been working — close co-operation with growers' organisations on a fixed basis, which has led to stabilisation and security, and has minimised the speculative element.

Wherever speculation in primary products occurs, it is never to the advantage of the primary producer. In the event of a failure of the Referendum the whole marketing structure would collapse.

In the early days of our industry, before growers became organised, Raisins were hawked from place to place, and we were obliged to accept one penny per pound for our dried Raisins, and the speculators waxed fat.

The formation of the Dried Fruits Association, which constitutes a purely voluntary organisation of growers, is probably the first attempt made in Australia for the orderly marketing of primary produce. The scope of this organisation embodied a fair price to growers, and set down the terms and conditions under which agents should sell to distributors, and prices distributors should sell to retailers. The rates of discount and commission being fixed on a reasonable basis, which enabled the whole distributing organisation to work in harmony with the growers.

This organisation of growers and distributors being wholly voluntary, allowed vested interests outside the Australian Dried Fruits Association (known as the A.D.F.A.) to work in an independent capacity, purely as a buying and selling agency of a speculative character. These outside interests had gradually undermined the structure which had taken many years of hard work to build up, until the outsider almost entirely monopolised the protected Australian market, and forced the A.D.F.A. into the unremunerative overseas markets.

This condition of affairs caused an almost complete breakdown of orderly market, and induced the growers, as a body, to seek Government sanction to a scheme under Section 92 of the Commonwealth Constitution, whereby each grower would receive his fair share of the markets of the world, and at the same time oblige the buyers outside the A.D.F.A. to also take their fair share of the good and bad markets of the world.

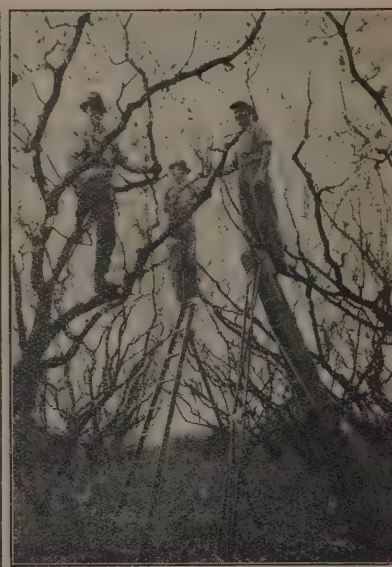
Thus the creation of State Dried Fruits Board and Commonwealth Export Control Board were established. This worked satisfactorily from a producer's and distributor's point of view, but was never to the liking of the speculative buyer, who saw a restriction of his excessive profits, and it is the speculative buyer who fought the action which upset Section 92. We are as a body of growers not asking for any additional power under the terms of the Referendum, but merely to restore those powers which enabled the grower and distributor to work in harmony for the past 12 years. During these years, beneficial trade treaties have been created with other countries, and the industry has enjoyed a stability which reacted in the interests of both the grower and distributor.

Failing the passing of the Referendum, our industry is likely to be dominated by the speculative buyer, who has only one interest—SELF—first, and all the time.

Celebrations at Renmark.

South Australia is celebrating its Centenary, and every country town and district of any importance is inaugurating its local functions. Renmark celebrations commenced on Monday last, October 19, and the proceedings were officially opened by the Hon. John Cowan, M.L.C. (in the unavoidable absence of the Premier), and was supported by the Hon. M. McIntosh, M.P., and Messrs. R. L. Mowbray, M.L.C., M. A. F. Pearce, M.P., T. C. Stott, M.P., and H. T. Angwin (engineer in chief).

The Mayor of Renmark, Mr. S. James, welcomed the visitors, and spoke to a large audience gathered before the Town Hall. On the proceedings being opened, visitors proceeded to the Show Ground, where the Renmark A. & H. Society held one of the most successful fixtures in the history of the settlement.



Pruning 21 year old Royal Apricots in the orchard of H. von Bertouch, Berri, S.A. Many of the trees are over 30 feet in height, all interlacing overhead. The trees carried a heavy crop of fruit during October.

Being a dried fruit and citrus centre, it was fitting that a fine display of both dried fruits and citrus should have been exhibited. One trade exhibit displayed no fewer than 27 varieties of citrus, ranging from citrons, the size of footballs, to the tiny Kumquats. The whole exhibit was artistically set out, with a map of Australia, and 1836-1936 picked out in colored wrappers. Messrs. Wood, Son, & Seary deserve credit for their work on this exhibit.

Mr. Mathews, who was in charge of the Publicity Van, displayed dried fruits in an attractive manner, and allowed our growers to see what is being done by the executive bodies to popularise our dried fruits. The main dried fruit exhibit was put up by the A.D.F.A., with fruit from all centres.

The outside ring events were keenly contested, and the usual range of dogs, fowls, implements, noisy side-shows, helped to make a successful day for grown-ups and kiddies alike. A whole week of fixtures is arranged for. Aquatic sports, bowls carnival, tennis tournament, band contests, school sports, and Scout's corroboree, race meeting, etc., so that for a week block work is more or less suspended.

★
Ploughing in a heavy crop of Beans in a young Orange grove on the same orchard.



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The Second Irrigation
was to have commenced on October 19, but as nobody seemed in any urgent need of water, and the festivities would have been at their height, it was thought that a week's postponement would be very opportune, without in any way jeopardising the health of the vines and trees. There is a great desire on the part of our irrigation authorities to adopt, wherever possible, the principle of withholding the second irrigation until after the cincturing has been completed. While this is not practicable on certain of our stiffer types of soil, and where a pumping unit extends over a period of 4 or 5 weeks for an irrigation to be completed. The Department of Lands has, however, adopted this principle on the Chaffey area, and the irrigation on this area

will not be given until about the middle of November, according to the time when the cincturing operation will be completed.

For some years past, Mr. S. V. Lyon has advocated this practice, and Mr. de Castella has followed it up with an explanation of the why and wherefore from a biological point, stating that the excessive growth created by copious Spring irrigations has detrimental reactions later on in the season.

There seems to be a period in the development of the vine when it becomes advantageous to allow the soil to dry out sufficiently to induce the roots to hunt for moisture, thereby causing a certain hardening process, which allows the plant to stand up to more severe climatic conditions than

when it has always plenty of moisture at hand.

Crop Prospects.

Currants, Gordos and Doradillos are showing good crops. Apricots are patchy, Pears are setting well, while Sultanas are also patchy. Some areas of this fruit have very good crops, while others are light. I should say that at present Currants, Gordos and Doradillos were above the average, but Sultanas just average, and Apricots a little below average. It is too early to estimate the Pear crop, but they have flowered very heavily, and on present appearance show a very good setting.

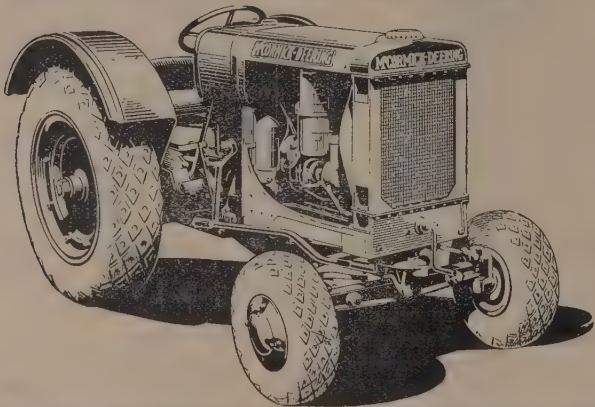
The citrus trees have had the biggest flowering I have ever seen, and the weather following the period of flowering and setting has been ideal. Cool, even temperatures, with an occasional shower of rain, and no high winds. The setting has therefore been exceptionally good, and, given no unforeseen circumstances, the next movement will be to watch the

December drop. But it is very heartening for citrus growers to have such a good showing early in the season.

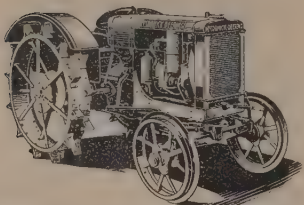
Spraying.

The second calyx spray has, in the majority of cases, been completed. The first calyx spray was given when 50 per cent. of the blossom petals had fallen, and the second one ten days later. In one or two cases growers have already completed their third spraying. Mr. H. D. Howie, one of our largest Pear growers, has installed a stationary plant for spraying his Pears. His pump is electrically driven, and the spraying solution is mixed in two 700-gal. tanks, and agitated with a rotary propeller; pipes are laid on overhead between the rows of trees, and long rubber hoses enable the sprayer to cover several rows with a length of hose. There are occasions when the land has been too wet from irrigations to enable the trees to be sprayed at the right time, but with a stationary plant this trouble is now obviated.—“Nemo.”

A SPEEDY WORKER IN THE ORCHARD...



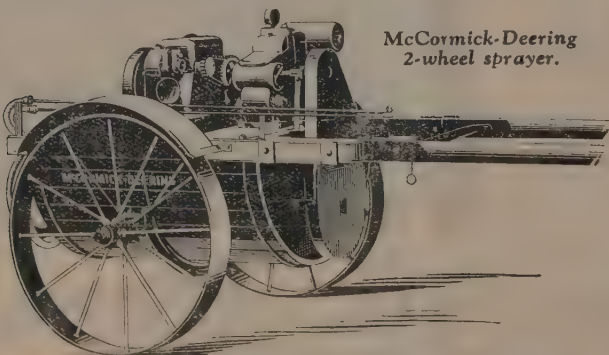
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TASMANIA

MONTHLY ORCHARD NOTES.
POLLINATION — SPRAYING — RE-WORKING.

A SUMMARY OF INFORMATION received by the Tasmanian Government Chief Horticulturist from the District Orchard Inspectors, together with other information relative to fruit culture, follows.

Weather Conditions and Blossoming.

Throughout September, weather conditions, though colder than average, were generally typical for the season. Apricots blossomed very erratically everywhere, and have on the whole set poorly. Generally speaking, young orchards are the most promising, and some may require thinning at a later date, older trees in full production may not even carry a half crop.

Peaches and Plums, on the other hand, have blossomed freely, and appear to have set satisfactorily.

Only a few varieties of Cherries are in bloom so far, and reference made

To the Pollination

of this fruit in last month's notes should be borne in mind. When profuse flower is followed by a poor crop each season, lack of adequate opportunities for cross-pollination may be suspected, and flowering limbs of other varieties should be placed in buckets in the crotches of the trees as test. If results are good, the budding-in of a few limbs of these varieties will generally solve the problem.

Frost Prevention.

Several of the frosts registered in the Cambridge and Tea Tree districts appear to have adversely affected Apricots, and following the reports from the mainland irrigation areas, growers have been making enquiries regarding orchard heating and other frost fighting devices lest Apples and Pears should suffer at a later date. The Department of Agriculture propose to lay out two trial areas with oil burners, one in the north and one in the south of the State, on areas where Apples and Pears frequently suffer from late frosts.

Spraying.

Black Spot.—Improved weather conditions recently have enabled orchardists to apply their "green tip" 6:4:40 Bordeaux sprays, and in places a second "green cluster" Bordeaux, at half strength (2:2:40) has been applied. As suggested in last month's notes, a number of growers have tried the addition of arsenate of lead to this spray on portions of their orchards severely affected in previous seasons with the Light Brown Apple Moth ("Green Grub"). Pears are now in full bloom, and where Pear Spot has been troublesome growers should be preparing for their "Calyx" 2:2:40 Bordeaux. With tender skinned varieties like Josephine, lime sulphur is often substituted at this period.

It has been noticed that many growers have failed to plough their orchards before the "green tip" Bordeaux sprays are applied, and have thereby laid their trees open to Spot infection from the old diseased leaves on the ground. It is obviously infinitely more difficult to obtain a good degree of protection by sprays if the air in and around the orchard during the period of most rapid growth and leaf development is often filled with spores of this fungus.

Codlin Moth.

The removal of bandages and scraping of trees has been completed, and growers should now be preparing or ordering their new bandages for application next month. Many growers regard the "Calyx" spray of arsenate for Codlin Moth as unnecessary, and whilst this may be true in some districts, the

Use of Lures

is the only way to make certain. These consist of jars narrowed at the neck and containing an inch or so of diluted molasses, cider, or Apple juice. The lures should be examined at intervals for the presence of drowned adult moths. In this way the time the first adults are on the wing can be checked and the necessary arsenate applied before the eggs deposited by them commence to hatch.

Canary Fly.

This pest is present to a greater or lesser extent in all fruit districts, and the first hatched larvae may now be seen on the under sides of the leaves on trees in affected areas. The young insect remains in the wingless stage for some weeks, and in most seasons the ideal time for the first control spray comes about the "Calyx" stage. At this time a pint of nicotine sulphate may be combined with 80 gallons of the first Codlin Moth arsenate of lead, and if this spray is effectively driven up on the under sides of the leaves, the kill will approach 100 per cent. Three or four weeks later, or at the second Codlin Moth spray, a similar addition of nicotine-sulphate should be given, and will kill any missed or late hatched insects. Once the insect is on the wing the time for effective control sprays has passed until the second brood materialises in February.

Re-Working Trees.

THE grafting of Pears has been almost completed, and the sap is now flowing freely in Apples. Stocks of Apple scions held in cool store by inspectors for re-working purposes are almost exhausted, and many late applicants have been disappointed, whilst the time of the Orchard Inspectors is fully booked up for some weeks ahead on grafting operations alone.

It has been noticed that a number of growers are heading their trees back into wood of 2-in. and greater diameter, apparently with a view to economy in time and material, as well as to cut out ladder work. It need hardly be pointed out that this is a false step, for the thicker the wood the slower the healing, and the greater the danger of "dieback." Indeed, proof of this is not lacking from last year's work. The motto should be to do a small number of trees, and do them properly. Where there is any doubt at all about getting through an area, make allowance on these lines.

Another point in regard to heading back is that it is preferable to cut back to a shoot or clean wood growth which may be worked over. Failing this, the usual rind graft is adopted at the tip, but where the trees are old and lacking in vigor the tip graft may be handled last, this enables the side grafts to get a start, and with the sap running freely, tip grafts will soon make up for lost time.

Neglected Areas.

With the approach of the growing season the importance of orchard hygiene increases, and all owners of fruit trees must either spray to control the major pests, or remove them entirely, as otherwise neighbouring, well-sprayed, commercial areas will suffer. Some 30 acres of unprofitable and neglected areas have been removed during the month, and about 100 acres more are still on the books. The Department of Agriculture does not wish to be forced into unnecessary prosecutions under the Plant Diseases Act, but should owners of such areas fail to carry out the necessary precautions for pest control, there is no alternative.

Packing Classes.

School packing classes have finished for the season, and the tests for the W. H. Calvert Shield will be conducted just prior to the Show. Over 30 schools have already lodged their entries, and from reports received, close competition of a high standard is assured. The competition fruit will be staged in the buildings on the far side of the grounds adjacent to the St. John's tent. Many of the schools are doing their own name placards, which will be placed in position after judging has taken place.

Berry Fruits.

Gooseberries have flowered and set a very satisfactory crop, the wet Spring and dry Summer of last year ensuring a high production of well-ripened wood.

Red Currants also look well, but Black Currants are slow to break into growth, and areas which produced heavily last year seem to have suffered through the drought.

Young Strawberry plantations have benefited from recent rains, but many replacements have been necessary owing to the dry weather. Older plantations have suffered loss also through the dry Summer and Autumn. This fruit is capable of considerable

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increase, and the demand for good quality dessert berries this season is likely to be heavy. Several growers are pursuing the policy of short-term beds; as has been pointed out previously, beds of more than three years are rarely worth retaining. To scrap a third and plant a third each year is an excellent policy if quality and production are to be maintained at a high level.

5/10/36.

N.S.W. CHERRIES ON THE WAY.

Early Lyons Light.

Following frosts, it is now anticipated that early varieties will crop somewhat lighter than was at first estimated. In the Young district, reports state that coloring is proceeding nicely. The Young Fruigrowers' Society warns producers against sending immature Cherries to market and affecting reception during the early season.

Early Lyons suffered most from frosts, but other varieties will not be so adversely affected. Provided a dry spell does not intervene, the coming Cherry season should be very satisfactory.

THE WAY OUT.

Primary Producers' Troubles.

We have received a letter from Mr. C. Kaiser, of Sackville North, N.S.W., in which he attempts to solve some of the problems confronting the primary producer. He explains that there are only two ways open to the producer to make primary production pay. Firstly, increased returns for his products, and secondly, reduction of production costs. Obviously, the latter is the only possible avenue open to the producer. He attacks present marketing laws and legislative action and believes personal independence is vital to our national wellbeing and trusts that Section 92 of the Constitution as at present interpreted, will not be disturbed.

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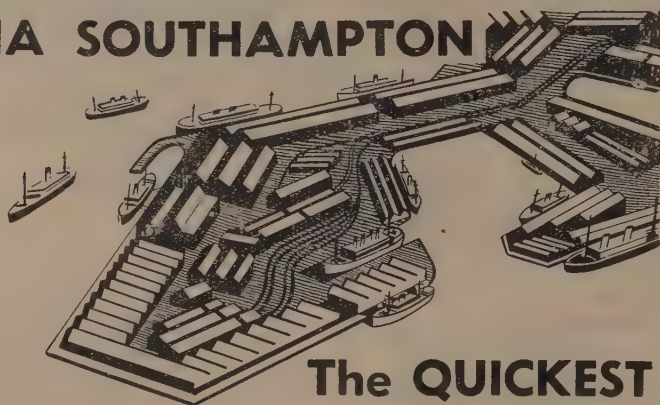
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N.S.W. News & Notes

Crop Reports :: Orchard Registration Pollination

A report received from the Under-Secretary reviews the crop prospects in N.S.W. as follows:—

Reports from inland districts mostly indicate very satisfactory blossoming of Apples, although severe damage was occasioned by frosts to some varieties, noticeably Granny Smith and Gravenstein, in the Crookwell district. At Griffith on, the Murrumbidgee Irrigation Area, some varieties are well in bloom; budding and early flowering is satisfactory at Leeton. Around Young, early and mid-season Apples are blooming, and heavy crops are expected to set. In Northern Tableland orchards the bloom is heavy, and prospects are excellent, although some frost damage is likely at Uralla, Arding and Armidale. Granny Smiths and Jonathans show for heavy crops around Bathurst, but Tasma, Delicious and Rome Beauty are likely to be light to medium; London Pippin and other kinds should set medium crops. Good blossoming is apparent throughout the Orange district.

Packhams are in full bloom, while Williams are commencing to flower in the Young district, and both varieties should set heavily. Other kinds also give indications of satisfactory settings. At Bathurst, only a medium crop is anticipated. Heavy bloom is showing on trees in orchards on the Northern Tableland, and the outlook appears excellent for heavy settings. In the Batlow and Orange districts and on the Murrumbidgee Irrigation Area all varieties appear to have satisfactory prospects. Although good to heavy flowering is taking place in the Goulburn district, up to 80 per cent. frost damage is reported in respect of Packham's, Howells, Williams and Keiffers, while Beurre Bosc and Beurre de Cap are affected to the extent of about 50 per cent. Winter Cole and Winter Nelis suffered the least damage.

Early varieties of Cherries were practically all destroyed by frost at Crookwell, while in the Bathurst area 75 per cent. of the crop was lost. At Young, the fruit is setting; only slight injury is reported and generally good crops are expected. The flowering is said to be satisfactory in the Orange district.

Early Apricots suffered severely from frosts in many centres. A total loss is likely at Bathurst, while in many orchards in the Young district the crop is ruined; little fruit remains at Goulburn. At Griffith and Leeton, the original setting was light.

Coastal.

In these districts the setting of early varieties of Apples was good, while later maturing sorts are blooming freely or promise well. The limited number of Pear trees are also expected to crop satisfactorily.

Early Apricots are developing well in most orchards; at Windsor good yields are expected, while in the Maitland area crops are said to be heavy. In the Parramatta district, medium settings are reported.

Generally medium to heavy crops of Plums are in sight, but rain is badly needed to assist development.

Owing to the profuse setting of early Peaches, thinning out of the fruit appears necessary in many or-

chards. Substantial rains are needed throughout all districts.

Citrus.

Heavy blooming of citrus trees is reported from Windsor, but, as very dry weather prevails, some doubt is expressed as to the ultimate setting of Navels. Conditions are also adverse in the Hills district, where all groves are affected. Frosts damaged blossom shoots, and new growth on trees in some parts of the Murrumbidgee Irrigation Area, but in others comparatively little injury was sustained. At Leeton harvesting of Navels is proceeding as rapidly as possible, and only about 20 per cent. of the crop remains on the trees. Approximately 10,000 cases of Valencias have been picked for export from this centre.

Bananas.

Larger consignments should go forward to market from the Tweed River district. The fruit, however, is ripening while not fully matured, owing to the very dry weather experienced.

Around Murwillumbah rain and warmer conditions are necessary to stimulate growth. The marketings are expected to be good from some areas, but poor cuttings are indicated from others; generally the fruit is smaller than usual.

N.S.W. Fruitgrowers' Federation

Report of October Meeting.

The Board of the Federation met in Sydney on October 15 and 16, and an abridged report of the business considered includes:—

Citrus Advisory Council.—Report received from Adelaide advising the formation of an Australian Citrus Advisory Council. The Federation approved of the creation of such Council, and agreed that representation should be on a State basis, with one representative nominated by the Commonwealth Government. State representation to be:—4 from N.S.W., 2 each from Victoria, South Australia, Western Australia and Queensland, a total of 13. The objects of such Council were defined.

1934 Export Bounty.—Action deferred pending further investigation by Government.

N.Z. Embargo.—Report of President and Secretary received.

Early Closing.—A report upon the proposed early closing of fruit shops was considered, and it was decided to take appropriate action to safeguard the interests of growers should the proposal be applied.

Report on Visit to New Zealand.

Following a visit by the President and Secretary to New Zealand, a full report by these gentlemen was submitted. They worked in co-operation with Mr. P. S. Macdermott, whose report is reviewed elsewhere. They reported confidence that the industry in N.S.W. would benefit from their visit and that the N.Z. Fruitgrowers' Federation could be expected to raise no objection to the lifting of the embargo provided that reasonable safeguards were adopted and a quota basis agreed upon that would protect the local grower against the flooding of the market with cheap fruit.

Orchard Registration Fund

Its Operation in N.S.W.

A PAPER submitted to the recent Interstate Fruitgrowers' Conference at Adelaide, by Mr. C. G. Savage, Director of Fruit Culture, N.S.W. Department of Agriculture, was full of information regarding the operations of the fund. As far back as 1893 what is now known as the Fruitgrowers' Association began to work in the interests of its fruitgrower members, as a voluntary organisation. While voluntary methods were productive of much good, they were not entirely satisfactory, and legislation was sought to require an acreage registration and a fee that would give some permanent funds for carrying on the work of protection to the industry.

In 1924 such provision was made under a new Plant Diseases Act, and a fee struck not to exceed 1/- per acre. From such fees, grants were to be made available to organisations which would use them for the further production, treatment, and sale of fruits, subject to the Minister's approval.

Registration began in January, 1926, and in that year the sum of £3,547 was received in fees. The receipts for the past two years have been £6,233 and £5,806 respectively. These amounts are paid into a Trust A/c. at the Treasury, and Government makes a charge of 10 per cent. for administration expenses. All registrations must be renewed by February 28 in each year, and must cover all bearing and non-bearing fruit trees. In the case of new orchards, they must be registered within one month of planting.

In 1935 there were 25,553 registrations paying an average of 4/6 each. A central organisation, the Fruitgrowers' Federation, has the responsibility of allocating the fees collected. Its service to the industry includes representation at all State and Interstate Fruitgrowers' Conferences, co-operation with kindred organisations, such as the Co-operative Bud Selection Society, N.S.W. Apple and Pear Export Association, N.S.W. Citrus Export Association, and others. It has been prominent in fighting for an export guarantee on Oranges, the Mandarin Relief Act, Fertiliser Bounty, and negotiations with the Fruit Industry Sugar Concession Committee.

The Federation employs an efficient market representative in the Sydney fruit markets to watch the interests of the growers. Advertising campaigns to encourage a greater consumption of fruit are also conducted. Research work is not neglected, and grants have been made towards thrips investigation, and for financing other experiments and investigations undertaken by the Department of Agriculture. The employment of temporary inspectors to meet conditions that have arisen from insect pest infestation are some further avenues of service which the funds received from registration fees have made possible.

Transport and marketing problems have been studied, both locally and abroad, and supplies of parasites for controlling White Wax Scale and Fruit Fly have been secured.

In conclusion, it may be claimed that, whatever disadvantage a compulsory fee might involve, the benefits made possible by this means far outweigh such disadvantages.

Pollination of Plums

Interesting Tests in N.S.W.

THE GENERAL FRUITING of crosses of Plums made since 1928 by plant breeders of the N.S.W. Department has not yet commenced, and there is as yet no indication of the practical value of the breeding programme. The pollination results so far obtained, however, have proved of decided value, because, as self-fertile, partly self-fertile, and self-sterile groups have been found, information has become available as to the most suitable pollinisers.

Pollination work with English Plums at Bathurst Experiment Farm has been summarised by Mr. W. T. Atkinson, Assistant Plant Breeder, and Mr. F. T. Bowman, Fruit Research Officer, as follows:—

Grand Duke: Self-sterile, but cross-fertile with President, Ponds, and Giant, of which the first is the most suitable.

President: Practically self-sterile, but cross-fertile with Angelina, Grand Duke, Giant, and Ponds.

Ponds: Evidence of self-fertility needs verification, but is cross-fertile with Giant, Grand Duke, and Angelina, of which the first is the most suitable polliniser.

With regard to Japanese Plums, the Assistant Plant Breeder (Mr. Shirlow) states that at Hawkesbury Agricultural College (N.S.W.), Santa Rosa would appear to be a good variety for pollinising Shipper, Chalco, and Shiro, while Santa Rosa is itself quite self-fertile. Chalco failed to set fruit when selfed during the past season, and a set of five per cent. when selfed in 1933 is scarcely satisfactory as Chalco has been reported in one case to be self-fertile abroad, this variety will be further investigated in this respect.

Thinning for Quality

Advantages Stated.

Commenting on the probable heavy setting of both pome and stone fruits, officers of the Fruit Branch of the N.S.W. Department of Agriculture point out that it may be necessary in some cases to thin the crop.

The thinning of the fruit is one of the most important of orchard operations, it is stated, and with some classes of fruits ranks in importance with pruning, spraying, and cultural practice. At the present time, particularly, though it applies at all times, "quality" fruit must be produced in order that the grower will receive remunerative prices for his product. It is quite true that there is a limited market for second grade, or poorer quality fruit, but it can be safely assumed that, even if all growers aim for the production of high quality fruit, other factors than over-cropping and in many cases, uncontrollable factors, will result in there always being sufficient low quality fruit to supply this market. A considerable amount of thinning or reduction of the crop is, of course, done when the trees are pruned, but irrespective of how, or by whom, the trees have been pruned, the thinning of the fruit is still an essential operation with many fruits, in many seasons.

With some fruits, such as Cherries, the question of thinning does not arise, but fruit such as Apples, Pears, Peaches, Plums, and Apricots can all be thinned with advantage in the years of heavy setting.

Damaged Fruit May be Removed.

A point that should be realised in connection with the thinning of fruits is that the grower has an opportunity to eliminate not only the blemished and badly misshapen fruits, but also the smaller fruits. These latter will

remain the smaller fruit throughout their growth, and give the highest counts when packed in the boxes.

Arriving at the percentage of fruit which should be removed is really a question of studying the individuality of the trees, each tree being thinned not only according to its size, but also its present condition and its apparent ability to carry the crop.

Assistance in Disease and Pest Control.

A point seldom taken into consideration with the thinning of fruits is that a much better coverage can be obtained and maintained on the fruit with spray materials, with a consequent improvement in insect pest and disease control, such troubles as brown rot of stone fruits, which spreads very rapidly when the fruit is in dense clusters, and the codlin moth in Apples and Pears, being influenced in this way.

BANANAS DAMAGED.

Cyclone Causes Heavy Loss.

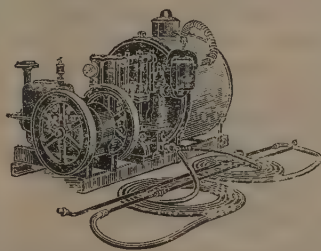
A report from Byron Bay states that during a recent cyclone that visited the Eastern Coast lands, 50 acres of Banana trees were partially or wholly destroyed, and upwards of £2,000 damage is reported. Not only was the loss of fruit great, but bearing will be affected for possibly 18 months, until the young suckers reach the fruiting stage. Several northern N.S.W. plantations also suffered from hail and wind.

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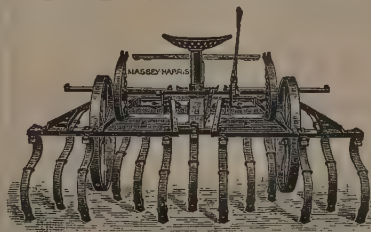


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Comprising 2 h.p. Sundial Engine, Spray Pump—connected to engine by gear drive—with strainer and Y hose connection, and Double Spray—including two 20-ft. lengths best quality 5-ply, 3-in. rubber hose, taps, 5-ft. director rods, and nozzles... £32/15/- Copper Tank, 50-gallon, with hose connection to Pump, Strainer, Agitator and Draining outlet... £13

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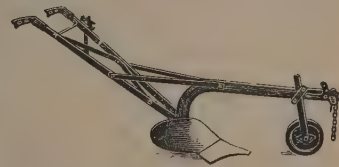
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Bare, with fixed handles, £4.
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GRIFFITH CO-OP. LTD.

Record Trading Reported.

The annual report of the Griffith Co-operative Co. Ltd. shows a satisfactory increase of business over the previous year's report. Profits amounted to £1,342/10/6, of which £149/3/6 was contributed by the cool store. In the trading department the turnover of £37,022 created a record, and was £4,246 more than last year.

The report stated that quality fruit can always be sold at good prices. Apple growers received 5/3 net, and 7,000 bushels were packed for export out of 18,000 lugs delivered. 4,035 tons of canned fruit was the largest volume yet handled by the company. Dried fruits, too, were heavier than in the previous year, but re-working resulted in both Sultan and Currants declining in tonnage.

The report states that it is hard to prophesy the coming season's prospects. The Peach crop is entirely sold, but the Apricot crop is not so promising. The dried fruits position is largely dependent upon future repercussions from the Section 92 dispute.

As an indication of the company's activities, the report states that 651,410 packages, representing a weight of 13,988 tons, has been handled by the Railways from Griffith, and the freight paid on them totalled £18,866. It is a good report of progress, and the company and its producer-shareholders are to be complimented.

Fruitgrowing in Queensland

FORTUNATE CLIMATIC CONDITIONS.

THE lengthy paper submitted by Mr. H. Barnes, Director of Fruit Culture, Queensland, before the recent Interstate Fruit-growers' Conference at Adelaide, was packed with interest and information. He is convinced that as a State, Queensland has a wonderful future. Its fruit industry is certainly contributing much to the success and prosperity of Australia.

The outlook for fruit producers in Queensland is bright, and the production of so many varieties of fruit is increasing rapidly to meet the expanding trade for fresh fruit, as well as for factory uses. With an area of over 429 million acres, and a varied climatic range, practically all known commercial fruits can be grown somewhere in the State. In a practical manner, the State has three distinct sections:—The coastal region, comprising some 1,500 miles of seaboard, suitable for tropical and semi-tropical fruit production, the sandy alluvial soil regions in the rivers and creeks areas, and the coastal regions, which are heavily timbered, free from sandy loams, and though not naturally rich, are excellent fruit soils when systematically manured and cultivated.

Mr. Barnes then described the changes in climate and soil found in the various regions, and explained

how various districts were admirably suited for the production of specific varieties of fruit. Compared in this way, he showed how it was possible for the successful commercial production of almost every variety of fruit in Queensland.

Of all fruits, Bananas represent the greatest production, about 15,000 acres being the average acreage devoted to this fruit. Unfortunately, owing to the comparative small capital outlay required for Banana growing, and the quick maturity of the trees, speculators began to exploit this field a few years ago, and over-production was brought about, spoiling a reasonable return to growers, and affecting the prospects of the industry. Now, however, much of this speculation has been eliminated, the true producers are receiving payable returns, and the prospects are bright.

The Pineapple industry is seriously challenging the Banana industry, and a considerable extension of planting in the coastal districts north of Brisbane is taking place. The application of modern scientific methods of production has doubled production per acre, and this factor is forcing a search for overseas markets. Fortunately, the main diseases affecting Pineapples are chiefly of a physiological nature, and can be avoided by planting in suitable locations. At present the production of Pineapples is around 1/2 million cases, but this figure will doubtless be increased in the next few years. Australia consumes approximately half of this quantity, and the balance is processed for local and export markets.

Citrus production acreage is almost stationary, but new areas, where irrigation is practicable, are being opened up, and it is anticipated that increases in production as well as in quality will be seen.

The production of deciduous fruits and vegetables is also growing, and, in the case of Apples, of which two-fifths of planting have yet to come into bearing, the production will shortly be greatly increased. Granny Smiths and Jonathans are the two most popular varieties. In stone fruit and vines, about 25 per cent. trees have still to reach bearing stage, but as Queensland does not yet produce sufficient of these for her own domestic requirements, there is a future for such varieties.

A splendid avenue for the utilisation

of tropical fruit for fruit salad is being recognised, and the C.O.D. and private canneries are providing an opportunity for growers to expand their production of such fruits. Pulped fruit salad is finding good reception in Great Britain and U.S.A., and export in this product is growing. Experiments in the transport of Papaw to Southern States will result in greater quantities of this popular fruit being supplied in future. Other tropical fruits, for which Queensland has a monopoly, are receiving increased attention.

Tomato growing is increasing, and the climatic conditions favour the growing of this product and seasonal differences in various districts permit an almost continuous supply of Queensland Tomatoes all the year round. The present production approximates half a million bushels, and represents a value of about £200,000 per year.

Scientific research is being undertaken by the Department of Agriculture into all phases of fruit production, with satisfactory results, and co-operative marketing legislation is materially assisting fruit growing in this fortunate Northern State.

We have received from the Queensland Department of Agriculture, two booklets by Jas. H. Gregory, Instructor in Fruit Packing, entitled "Marketing Oranges at Home and Abroad" and "Apple Packing for Export and Home Markets." These booklets are well illustrated and contain valuable information.

CHINA BUYS FRUIT TREES.

From Australian Growers.

The St. John's Nurseries, Somerville, report having despatched a shipment of fruit trees to China. The shipment comprised several varieties of Apples, Pears and Apricots. The buyer was formerly a Chinese business man in Victoria, and upon his return to China conceived the idea of attempting to introduce fruit trees from Australia into his native country. As far as can be ascertained, this is the first time on record that fruit trees have been exported to China from Victoria. It will be interesting to learn how they acclimatise in and react to the Northern conditions.

WESTERN AUSTRALIA.

Heavy Apple crops are anticipated in W.A.

In the Mt. Barker and Bridgetown districts the main varieties are setting well.

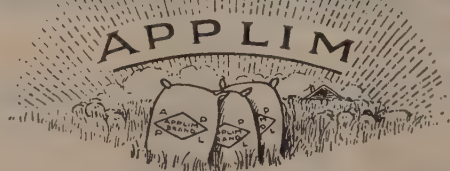
The crop may be a record for the State.

There has been no sign of thrips.

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BURNT LIME — BURNT LIME SLAKED — GROUND LIMESTONE OR CHALK.

(By W. C. Robertson, Chemist, Victorian Dept. of Agriculture.)

THE COMPARATIVE VALUE of different forms of lime was the subject of an interesting article by Mr. W. C. Robertson, chemist, Victorian Dept. of Agriculture in a recent issue of the Department's Journal.

After detailing the requirements under the Agricultural Lime Act of 1934—registration of brands, declaration of analysis, etc., Mr. Roberson states that the Department now has a list of registered brands which is obtainable by those using or contemplating the use of agricultural lime for top dressing. The list is divided into three sections, viz., burnt lime, burnt lime slaked, and ground limestone or chalk.

Burnt Lime.

When "natural" lime, as calcium carbonate in the form of rock (limestone, marble, etc.) or powder (chalk), is subjected to a high temperature in a kiln having an adequate air draught, the carbonate decomposes into calcium oxide and carbonic acid gas. The latter is drawn off through the flue, and the calcium oxide (lime) remains as stone or powder, more or less white in color. This is the caustic lime used so extensively in the building trade and known under various trade names, such as "Fat," "Quick," "Stone," "Roche," "Rock," "Lump," and "Caustic" lime.

The quality of the burnt lime will depend largely on the purity of the rock, but it should contain from 85 to 95 per cent. of available lime (calcium oxide). However, certain difficulties attendant to lime-burning result in the production of burnt lime of varying quality, and, whereas the best selected and higher grades find a ready market in the chemical and building trades, it is the inferior article which may prove useful and economical as a soil dressing.

Burnt Lime, Slaked.

When burnt lime is treated with steam or water it becomes hydrated or water-slaked (slaked lime), in which condition the lime is present as the hydrate or hydroxide. Should the burnt lime be exposed to air, it becomes air-slaked, and, if the exposure be carried on over an extended period, the lime will finally revert to its original form, viz., carbonate.

Air-slaked lime is a totally different material from water-slaked lime, and may contain a large proportion of the lime in the form of carbonate associated with smaller percentages of hydrate and oxide. When burnt lime of the best quality is completely water-slaked the resultant product would

contain from 65 to 72 per cent. of calcium oxide (lime).

Ground Limestone or Chalk.

Ground limestone or chalk is the finely-ground natural limestone or the conditioned powder from a chalk deposit or chemical works. In brands of this description the lime is wholly carbonated, and is commonly known as "mild" lime.

The rock or mineral, if chemically pure, would contain 56 per cent. of lime (calcium oxide). Reference to the list of registered brands, under the heading of ground limestone, will show analyses varying from 30.8 to 55.9 per cent. lime (calcium oxide). Any brand of mild lime guaranteeing 47 per cent. and over may be regarded as an agricultural lime of high quality.

The Lime Cycle.

The decomposition of limestone rock and the subsequent re-formation of the calcium carbonate are illustrated in the accompanying graph.

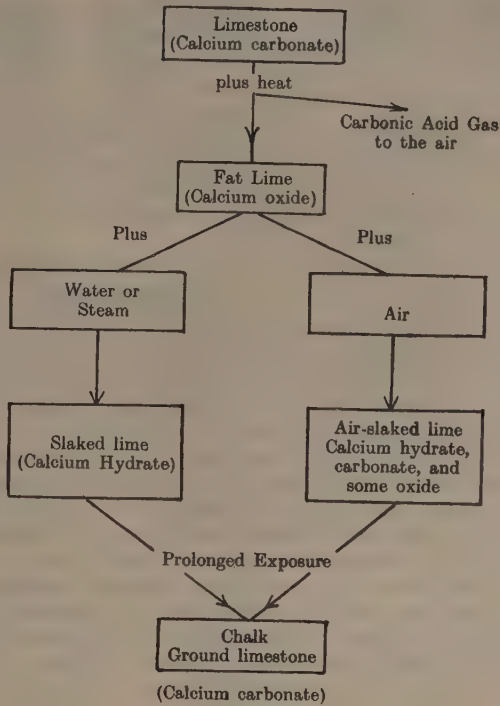
The Form of Agricultural Lime to Buy.

LIMING IS PRACTISED mainly by orchardists and market gardeners, but in recent years there has been a tendency on the part of Victorian graziers and dairymen to use agricultural lime as a top-dressing for pastures. While the purpose of this article is not to enter into the economics of the proposition, it is most important that certain salient facts should be in the minds of those contemplating the purchase of lime for agricultural purposes.

"Liming" in the orchard or market garden is a totally different matter to liming grazing areas. In the former case the main objectives are improvement in soil texture, decomposition of organic matter into humus, assistance in the artificial fertilizer programme, particularly in rendering nitrogen available, destruction of insect pests and control of fungous diseases, and the replacement of lime lost from the soil through methods of intense culture. The dressings are comparatively heavy.

On the other hand, the liming of pasture land is not such an exacting matter, amounting practically to correcting soil acidity, and the acreage involved is usually so extensive that the element of cheapness must be considered. The rate of application, therefore, is usually light.

Generally speaking, the mild form of agricultural lime, i.e., ground limestone, is not the most suitable for use in the orchard or market garden. In



the case of ground burnt lime or slaked burnt lime, it should be remembered that the quality of these forms of agricultural lime is very hard to control; and, furthermore, where an alteration to the physical condition of the soil or pest destruction are items of small moment, the fact that burnt lime in any form quickly reverts to the carbonate or mild form after distribution on the soil must be considered prior to coming to a decision as to the form of lime that should be purchased. Actual trial is the safest plan.

Brands on the Market.

In reviewing the brands of agricultural lime which have been registered, the main points to be considered are—

- (1) Percentage of lime (calcium oxide).
- (2) Price per ton.
- (3) Form in which lime occurs.
- (4) Degree of fineness.

Ground Burnt Lime.

The average content of lime (calcium oxide) in the brands of burnt lime (unslaked) which have been registered is 75.45 per cent., with an average price of £2/17/6 per ton, and an average fineness (i.e., material passing through a 20-mesh sieve) of 67 per cent.

When computed, this gives an average cost of 9.14 pence for each 1 per cent. of lime in the form of unslaked lime in a ton of ground burnt lime. In this and subsequent calculations no notice has been taken of magnesium oxide, but this does not necessarily mean that it is valueless.

Burnt Lime, Slaked.

The average content of calcium oxide in the brands of slaked lime which have been registered is 61.17 per cent., and the average price is

£2/3/9 per ton with an average degree of fineness of 76 per cent. These figures give an average cost of 8.88 pence for each 1 per cent. of lime (calcium oxide) in the form of slaked lime per ton of burnt lime, slaked.

Ground, Limestone, Chalk, Etc.

The brands of ground limestone registered contain, on the average, 46.41 per cent. of lime (calcium oxide) in the form of carbonate, with an average price per ton of £1/8/6. The average degree of fineness is 83.4 per cent. The computed average cost of each 1 per cent. of lime in the form of carbonate is 7.43 pence per ton.

The average cost of each per cent. per ton of lime therefore is—

	Pence.
Burnt lime	9.14
Slaked lime	8.88
Carbonate lime	7.43

In these computations no allowance has been made for extra cost of transport between factory and farm.

In computing values per ton the unit for carbonate lime, which is a very stable material, may be taken as firm, and used when calculating comparative values between brands of "mild" lime, but little notice can be taken of the units for brands of burnt lime, since reversion may readily take place, and thereby destroy margins.

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Degree of Fineness.

The mechanical condition of ground limestone, within limits, is of great importance, but it should be remembered that stone ground to an impalpable powder may cause trouble in distribution. It is fairly safe to assume, in the case of ground limestone, that an 80 per cent. fineness through a twenty-mesh sieve would serve the purpose both from the practical and economical standpoint.

In the case of burnt lime (unslaked) the degree of division is of minor importance, so long as it will distribute, because, on application to the soil the lime must slake and, in slaking, break down to a very fine powder, giving the even distribution desired irrespective of the mechanical condition of the original lime. Agricultural burnt lime (slaked) in the main is in fine powder form, but it may contain some lumps of unburnt lime which are easily discernible. This form of lime is not favored by some because its fineness causes trouble in the distributor.

Time of Application.

The time to apply lime to the soil will depend on the objective, but generally speaking the Autumn is the most suitable. It should be applied on the surface and harrowed in. In the market garden lime should be used periodically after the preparation of the land for Autumn and Spring cropping.

Lime and Artificial Fertilizers.

Superphosphate: It is questionable whether lime in any form, when used as a top-dressing, adversely affects superphosphate when the fertilizer is used for the same purpose. However, in the case of seed sowing some weeks should elapse between liming and the sowing of seed with superphosphate.

Sulphate of Ammonia: On no account should liming and manuring with sulphate of ammonia be practised together. In the case of burnt lime dressings, a season should be allowed to lapse before applying sulphate of ammonia, and to avoid loss of nitrogen it is as well to allow four to six weeks to pass before using the fertilizer in the case of an application

of ground limestone. The same applies to manuring with dried blood; but the nitrogenous fertilizer sodium nitrate may be applied at any time after liming with any form of lime.

Blood and Bone, Bonedust, Etc. — Mild lime may be applied simultaneously with animal fertilizers, but when burnt lime (slaked or unslaked) is to be applied allow two months to elapse between liming and applying the fertilizer.

In conclusion it may be pointed out that the policy of comparing dressings of burnt lime and ground limestone by doubling the amount of the latter, i.e., reckoning 1 ton of burnt lime to be equivalent to roughly 2 tons of mild lime is fairly safe, so long as it is not made reversible.

Teacher was growling at Tommy about his work.

"Charlie Smith, your friend, does twice as much work as you," said the teacher.

"I know he does," replied Tommy with a smile. "I've told him about it before, but he won't stop."

WHEN ARE PEACHES RIPE ?

Invention Now Tells.

GUESSWORK is eliminated from the question of when Peaches are ripe enough to pick by a flesh firmness pressure tested perfected by Prof. M. A. Blake, Chief of the Division of Horticulture of the New Jersey Agricultural Experiment Station, Rutgers University, reports the "New York Packer."

By selecting sample Peaches from a tree and exerting pressure, orchardists can tell, after reading the gauge, just how soon the fruit must be picked and sent to market. A reading of nine to ten pounds pressure to penetrate the fruit with the plunger indicates that the fruit's flesh is sufficiently firm to stand long distance shipping, up to a thousand miles. If the reading is only three pounds, the fruit on the tree from which the samples were taken is "soft ripe," and should be eaten almost as soon as plucked. Between these two extremes are three intermediate standard pressures, scientifically charted by the inventor, "firm ripe," which indicates need for immediate harvest and marketing "hard ripe" Peaches that can be held at the market for second day sales and "nearby shipping ripe," for markets within a few hundred miles.

Color has been the basis in the past for determining the state of ripeness in commercial Peach orchards. The development of new improved varieties of Peaches, some of which start to blush when still "green" or immature, required some foolproof mechanical device to supplement the practiced eye of the grower. Professor Blake set to work on the problem and devised a gauge and standard which, it is expected, will save growers from depreciation losses caused by picking their Peaches too soon or too late.

The shells which the sea rolls out on the shore are not its best. The pearls have to be dived for.

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DRIED FRUITS NEWS AND NOTES

SECTION 92a

12th Annual Report

THE proposed alteration to the Constitution, rendered necessary by the decision in the now famous "James case" is apparently to be confined to the control of marketing only, and to implement legislation already in force or desired by the individual States.

In the House of Representatives on October 14, the Commonwealth Attorney-General (Hon. R. G. Menzies) moved the second reading of the Bill to provide for a referendum in a proposed alteration of the Constitution to give the Commonwealth Parliament power to legislate in respect of schemes for orderly marketing on a national basis.

The proposal is to add to the Constitution a new Section to be known as 92A reading:—

"The provisions of the last preceding Section (92) shall not apply to laws in respect of marketing made by the Parliament in the exercise of any powers vested in the Parliament by the Constitution."

Effect of Amendment.

The broad effect of the proposed amendment, Mr. Menzies explained, is this:—

The powers which the Commonwealth Parliament now has to make laws with respect to interstate trade and commerce, taxation bounties, and the like, for the purpose of giving effect to marketing schemes, will not be extended, but they will be freed from the restrictions upon them contained in Section 92.

The result will be that where the Commonwealth Parliament, under its existing powers, passes a law which is designed to supplement marketing schemes contained in State legislation, it will not be open to question because it interferes with the freedom of interstate trade.

The word "marketing" is used because, although a new word in the Constitution itself, it is well understood as a description of the business of buying and selling goods and commodities.

The addition of some words limiting it to primary products was at one stage considered, but there are great difficulties about defining "primary products," and there are important commodities, such as butter and flour which would probably not fall within the description of primary products at all. In order, therefore, to avoid difficulties in the event of various Parliaments desiring in future to control same commodity in the interests of the general public, it has been thought proper to use the widest possible expression.

The Necessity.

The necessity for a Constitutional amendment arose from the decision of the Privy Council in James v. the Commonwealth. The immediate effect of the decision in that case was that Section 92 binds the Commonwealth as well as the States. It is not altogether easy to determine what effect the decision will have on the mass of State legislation which affects in-

terstate trade, but it is at least clear that a Commonwealth Act which seeks to impose a licensing condition upon interstate trade is invalid, and it follows that the Dried Fruits Acts, the Dairy Produce Act, and the Wheat and Wheat Products Act are invalid.

All Parties Agree on Principle.

"It is the policy of every party in this House to give a home-consumption price to Australian farmers. There have been arguments regarding the machinery by which this should be done, but there has been common agreement as to the desirability of giving what is, in substance, a home consumption price to the men who grow our primary products."

There were two ways of doing this: (a) purely financial provision such as excise and bounty; or (b) the institution of a properly controlled scheme of organised marketing.

The objections to excise and bounty are partly political and of a kind which experiences of recent years make clear, and partly intrinsic, in that it is very difficult under such a system to provide for stability over a term of years. Such stability could be provided by a system of orderly marketing. Hence the problem of a Constitutional amendment had to be faced.

"The Government has, therefore, decided to submit an amendment, the prime object of which is to recapture the ground which was lost by the Privy Council's decision and to validate marketing schemes of a kind now current."

WINDING UP.

Newcastle Fruit & Produce Co. Ltd.—By resolution passed 3/9/1936. Alfred A. Boa, liquidator, Newcastle, N.S.W.

DRIED FRUITS BOARD

Mr. Menzies Explains Proposal

IN a foreword to the 12th Annual report of the Commonwealth Dried Fruits Control Board, Dr. Earle Page, Minister for Commerce, states that as a result of orderly marketing of dried fruits, cultivated and processed under enviable conditions which form one of the most striking examples of intensive cultivation and closer settlement in the Commonwealth, the industry has emancipated itself to a remarkable extent.

Production.

A study of the annual report presented by Mr. Alex. F. Bell, Acting Chairman, shows that production of Sultanas, Currants and Lexias has increased from 37,217 tons in 1924, when the Board was established, to 66,904 tons last year. Of these quantities the exports from Australia have risen from 24,528 tons in 1924 to 49,840 tons last year, doubling the export in the past ten years.

Exports to Great Britain.

The importation of Currants and Raisins into Great Britain in 1925 totalled 114,792 tons, of which Australia supplied 24,401 tons, but last year Britain took 128,003 tons from all sources, and Australia supplied 30,725 tons. The comparative percentages of Australian dried fruits to Britain's total imports were 21.2 in 1925 and 24.0 in 1935.

It is interesting to note that in 1925 the average prices realised in Great Britain were Sultanas £68, Currants £30/15/- and Lexias £31/16/8, whereas the average prices (to June, 1936) were £42/2/7, £30/8/11 and £39/8/4 respectively.

Exports to Canada.

The recent remarkable increase of the receipt by Canada of Australian dried vine fruits is highly satisfactory. In 1925 the total exports to Canada were only 776 tons, but by

1935 this export business had grown to a total of 14,720 tons.

New Zealand.

Exports to New Zealand have consistently risen during the past ten years from 1,487 tons in 1925 to 3,790 tons in 1935. This latter quantity represents Sultanas 2,705 tons, Currants 561 tons and Lexias 524 tons. Substantial increases have followed the granting of preference to Australian Dried Fruits under the New Zealand-Australian reciprocal tariffs.

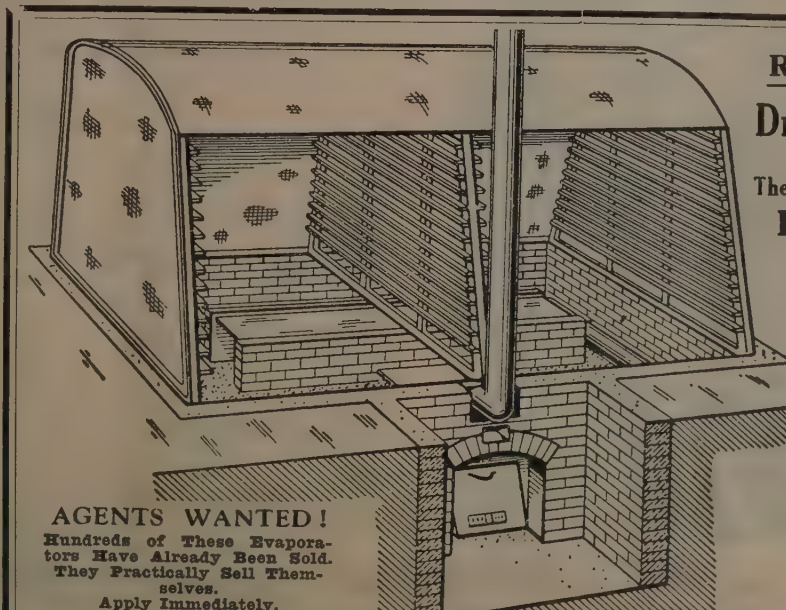
Section 92.

The report explains that the decision of the Privy Council in what is commonly known as the "James Case" does not affect the activities of the Board nor the position of exports as applying to dried fruits. It points out that its activities are not limited by the Commonwealth Dried Fruits Act of 1928, which is complementary to State legislation in Victoria, N.S.W., W.A. and S.A., and which applies to the internal regulation of the industry within the Commonwealth.

Improvement in Methods.

The report expresses appreciation of the improvement that has taken place in the matter of production and processing, and claims that most of the success in the effective disposal of a largely increased production is due to organised marketing, to a high standard of quality and to the repute which Australian dried fruits have built up in the world's markets.

Scientific research has been continued in co-operation with the C.S.I.R., and the results, although not yet outstandingly final, have justified the past investigations and a continuance of same in the future. The Board again reiterates its earlier warning against additional plantings that would largely increase production, in view of present international and economic conditions.



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Canadian Commends Australia. Mr. Bennett says Dried Fruits Good.

As a former Prime Minister of Canada, Mr. R. B. Bennett, who is visiting Australia, and who spoke at the opening session of the Federal Council meeting of the Dried Fruits Association held in Adelaide on October 28, can be heard with authority.

He stated that he could congratulate Australian exporters upon the quality of the dried fruits which they sent to Canada, but reminded them that the quality must be kept unquestioned if they hope to extend the Canadian market. The chief distributing centres for such fruits, he explained, were in the big prairie areas between the Rockies and the Great Lakes, where there is a population of two million people.

U.S.A. EXPORTS OF DRIED FRUITS.

Review of 1935-36 Season.

34 per cent. increase in exports of dried fruits from U.S.A. is reported for the 1935-36 season, as compared with the 1934-35 season. This is slightly above the average for the past five seasons, and is the largest quantity exported since 1931-32 season.

All varieties showed an increase except Peaches. Apricots recorded the highest increase by 94,000 cwt., or 76 per cent. above the previous year. Apples gained by 39 per cent., although still below the average for five years past. Prunes increased by 43 per cent., Raisins by 16 per cent., and fruit salad by 27 per cent.

Although 1930-31 and 1931-32 have been the largest exporting seasons, 1935-36 come next in comparison with the past seven years, of which records are available. It shows the fluctuation, as including all varieties, to observe the following export quantities expressed in thousand hundred-weights: — 1929-30, 2,981.6; 1930-31, 4,610.2; 1931-2, 4,181.2; 1932-3, 3,536.7; 1933-4, 3,595.0; 1934-5, 2,785.8, and 1935-6, 3,740.6.

Of receiving countries, United Kingdom easily leads the way with 947.1 thousand cwt., France, 669.2; Germany, 361.0; Sweden 316.8; Netherlands, 256.5; and other countries comparatively small.

The Use of Fertilisers.

Increased Yields.

FERTILISER experiments in various forms have been carried out for a number of years and conclusive results reached in certain directions. For instance, increased growth, accompanied by increased yields, have resulted from applications of nitrogenous fertilisers, writes A. V. Lyon in "A.D.F. News."

It is also recognised that when leguminous cover crops have been regularly grown, the soil nitrogen is maintained at a fairly high level. Our practice in recent years has been to apply the nitrogenous fertilisers on top of the cover crops as they are put down. This is based on the fact that at the termination of growth, the nitrogen is locked up in the cover crops. Applications at this stage are particularly important in cases where cover crops are grown on both rows.

Quite recent measurements of nitrogen fluctuations in soils on which cover crops are growing have shown that there is practically no available nitrogen at this period. The fallow row, after the rest in Winter, proves quite satisfactory if cover crops have been grown the previous year.

There is fairly general agreement that applications of fertilisers should be made as early as possible in the growing season. Growth responses from second applications of nitrogenous fertilisers later in the season have been obtained, but the total result of this late growth on yield and bud development are not fully determined.

There has been little evidence of yield increases by direct application of superphosphate. The use of this fertiliser is established as a necessity for the successful growth of cover crops, and possibly the phosphatic requirements of the vines are obtained in this way.

It is still difficult to obtain conclusive results from the use of potash on vines. Yield increases, if any, have not been measurable, and if results are to be obtained, they may possibly be found in improvements in the quality and maturity of the fruit. Such investigations are difficult, owing to variations in the yields and quality of the grapes on individual vines, and authentic results have not been obtained.

Drying Fruit Without Sulphur

Can be Done, But—

A report comes that the Food Products Laboratory of the University of California has been experimenting for years to work out a method of drying certain fruits without sulphur, including Apricots and Peaches, but with little success. Some growers certainly dry naturally, to fill orders from health food companies, but they dry only sufficient for such orders, and Figs and Olives can be obtained dried but otherwise unprocessed.

The chemists at the laboratory say that the trouble is that unless such fruit is ordered in advance, it is unsafe to dry it, as few people will buy or eat it. Peaches, for example, not only dry dark and unattractive, but the flavor is unattractive to most people.

There used to be a belief long ago that medicine to be effective had to be strong and hard to take. A good deal of the health food these days seems to be eaten on a similar basis. Naturally the demand for such food is limited in amount. However, it exists,

The moral of the case, says the "Californian Cultivator," is that, excepting for a very few fruits which can be dried well without other processing, of which Figs and Olives are examples, the producer better have his fruit sold before he dries it without sulphuring. Also buyers should order in advance of the drying season or they are likely to find nothing available for them.

DRIED FRUITS INTO GERMANY.

Increased Importations.

For the first six months of 1936, imports of dried fruits into Germany were 16 per cent. more than in the same period of 1935. Dried Apples and Pears were considerably reduced, owing to the problem affecting barter transactions with U.S.A., but shipments from British countries slightly increased. Peaches and Apricots remained about the same as 1935, with larger consignments from Persia and Turkey. Prunes from Yugoslavia and Bulgaria increased about 140 per cent. as a result of the diversion of trade from U.S.A. Cur-

rants from Greece arrived in slightly increased quantities. Sultanias from both Greece and Turkey increased by 60 and 15 per cent. respectively. Taken all through, Germany imported 12 per cent. more dried fruits during the period mentioned.

CO-OPERATION.

To Increase Dried Fruit Sales.

An agreement has been entered into by most of the large chain stores in U.S.A. by which a nation-wide dried fruits sales programme will be undertaken throughout the country. It is expected that California will benefit most by this concerted selling action, but all forms of dried fruits will doubtless increase their sales. This organised co-operation between producers and distributors is a frequent experience in the United States, and in no case has it been proved that special efforts in selling or comprehensive publicity campaigns have not excited public interest or failed to increase, at least for the moment, greatly increased sales.

LARGE PRUNE CROP.

Reported from Danube Basin.

According to a report of Louis G. Michael, American Agricultural Attache at Belgrade, 50,000 tons of dried Prunes will be available for export from the Danube Basin this year. This is nearly double the quantity exported in 1935 from Yugoslavia, Bulgaria and Rumania. Favorable weather has assured a heavy crop of Prunes, and present prospects indicate a total production of 803,000 tons of fresh Prunes, as compared with 453,000 tons last year, or the average of 610,200 tons for the 5 years from 1930 to 1934. A considerable part of the crop of Danubian Prunes are used for distillation and for making Prune jam.

FIELD DAY AT WOORINEN.

District Products Worth £250,000.

A large number of growers attended a field day at Block 38H, Woorinen North, on October 14, when the President of the Enquiry Committee (Cr. P. T. Byrnes) stated the annual income from dried fruits and fresh Grapes in the district was valued at £250,000. Mr. A. V. Lyon reported that experiments in drainage had been conducted during the past twelve months, and would result in even more satisfactory results in future.

VICTORIAN BOARD MEETING.

At a meeting of the Victorian Dried Fruits Board in Melbourne on October 20, concern was expressed by the members at the possibility of additional plantings of vines being made at Piangil. The Board resolved to draw the attention of the Minister for Water Supply to this and to ask him if he would be good enough to state what was the policy of the State Rivers and Water Supply Commission on this question.

A letter was received from the Minister for Agriculture stating that the question of amending the Act to provide for the representation of tree fruit growers on the Board would be submitted to Cabinet as soon as possible.

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MORE TYABB ORCHARDS.

(Continued from October issue.)

The 100-acre property, close to Westernport Bay, of H. T. Noble, Tyabb, is situated at the corner of McKirdy and Denham roads, of which 50 acres are under fruit trees. The main production is Pears and Plums, which do exceptionally well in this locality. Ten acres of these are W.B.C., which bear regular crops of clean fruit and are sold to the Rosella and A.J.C. companies for canning purposes; other varieties are Beurre Bosc, Josephine, W. Nelis, W. Cole, Packhams, Keiffers, B. Park and Beurre Capiamont.

All varieties bloomed profusely this year, and Councillor H. T. Noble and Sons, Arnold and Bert, expect a record crop. They also have a young Apple orchard of 20 acres, principally Jonathan, Sturmer, R. Rome, Statesman, Delicious, Granny Smith, and Stewarts, all showing for a fairly good yield. This young orchard last

just at the approach of Tyabb from the Melbourne end. There are several good sandy rises on this 70-acre property, so that the drainage is more easily effected; on these rises are planted young orchards, just coming into bearing, of the very best selling varieties of Apples. Heavy cover crops are turned in each ploughing and plenty of poultry manure from his own birds, which are housed in commodious iron buildings on different parts of the estate. It is a picture to see these large flocks of layers roaming about the open spaces on absolutely free range.

Across the railway line, to the south, is an orchard and mixed farm which is seldom noticed by people, because it stands back from the Mornington-road. Here is some of the best orchard land in Tyabb, as well as some splendidly grassed paddocks. Messrs. A. Gibson & Sons are to be congratulated on their splendid Jonathans and other Apple trees which are now approaching their prime. This place was planted by the present owner.



Irrigating Goulburn Valley orchards. Pullars Cling canning Peaches at the orchard of C. J. Nash, Shepparton East, Vic.

season had a good crop, which was disposed of in Melbourne, Sydney and Brisbane at very satisfactory prices.

These orchards are situated on the lower grounds of Tyabb, and consequently considerable money has been spent in constructing deep open drainage. Each year regular sowings of manures are made, principally B. and B. and S. Ammonia. Every year the whole is sprayed with crude oil, and the pollinating varieties of Apples twice. In the ploughing seasons great care is taken to run all finishing furrows right out into the deep drainage system.

Unfortunately, orchardists living around that portion of Tyabb, abutting on Westernport, have been handicapped by lack of good roads. But lately, thanks to the untiring efforts of Cr. Noble, who is a member of the Frankston and Hastings Shire Council, considerable road improvements have been effected.

Another property worthy of special note is that of Mr. A. Paganonis, situated on west side of Main-road,

The firm of S. C. Borley & Sons have a number of properties situated in various directions in and around Tyabb and are amongst the most progressive and enterprising growers. Only growers such as the "Brunnings" or "Two Bays" handle more fruit than the Borleys, who regularly export a fair proportion of the crop.

Mr. J. Lilywhite, who recently owned "The Springs," Moorooduc, is now at "Emohruo," Cranbourne-road, Tyabb—has a very compact orchard of 47 acres. Here, the highest colored Jonathan Apples are grown, as well as other leading varieties. This orchard is harder pruned, more cultivation done, with heavier manuring, than elsewhere on the peninsula. The sons have their own flocks of poultry, each keeping a distinct breed.

Adjoining on Lilywhite's eastern boundary are Major J. Wilson, O.B.E., and Mr. J. Young, who for many years have resided on these properties.

Further along on Denham-road is Mr. D. Longmuir, an ex A.I.F. man, who, in addition to orcharding,

breeds W. Yorkshire pigs, and is a successful exhibitor at the Royal.

Opposite is one of Mr. Greink's places: this was recently leased by Capt. Harcourt, but is now managed by Mr. Greink's son, Clyve. There are large plantings of Apricots in variety to come in in succession, and the useful varieties of Pears, Apples and Plums.

Almost down to the beach, opposite Mr. H. Noble's is Mr. A. Denham's. Here Pears over 50 years old are bearing well. Plums also thrive here. Mr. Denham has lived in this district over 60 years.

RED HILL.

Quite a number of people have the places Red Hill and Red Cliffs mixed up in their minds as the same, both being fruit-growing districts. The former is about 52 miles from Melbourne, nearly due south, and is really the high lands at the south end of the Mornington Peninsula, from which can be viewed Bass Strait, Port Phillip Bay, with its forts at the entrance, and Westernport Bay, with its islands, French and Phillip, where the mutton birds come annually to lay and the seals to breed.

Red Hill has an altitude of 600-800 ft. These hills are rich red, with the soil of the gullies of darker color, and are famed not only for their panoramic views, gorgeous flora, and health-giving atmosphere, but for its valuable native timber, prolific bearing orchards, farms, vegetable and Strawberry culture and bright flower gardens.

Approaching Red Hill from the north we see Mr. O. Warnecke's property of 103 acres, of which 30 are in orchard, comprised of Apples, Cherries and Apricots—on the day of the writer's visit the owner was shortening back the new wood on the Apricots for the purpose of strengthening the buds, for following season.



Sub-soil ploughing, 1ft. 6in. deep, at the same orchard.

A good crop of clean fruit is showing for this year. Some large Reinettes were being "poled" ready for working over with Grannies.

Mr. Warnecke has proved to his satisfaction that lime in conjunction with manure is necessary for best results.

On Mr. Overgaard's property of 130 acres, of which 33 are under Jonathan, Grannies, Tasma and Delicious, Mr. H. J. Shearing has this fine property under his managership. He is an advocate of the 2-2-1 manure

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and green ploughing. The orchard generally shows the master hand.

At the other end of Red Hill is Mr. R. Edwards's property of 50 acres—25 acres under Jonathans, Stewarts, Yates, Rome Beauty and Rokewood. He uses all the poultry manure procurable, supplemented with blood and bone and the 2-2-1 mixture.

On this property are grown some of the finest of vegetables: Peas, Cabbage, Beans and Tomatoes.

A small choice herd of Jersey's and a flock of geese were also in evidence.

Mr. Edwards is the possessor of cups and many trophies won in competition for Apple packing.

A little further south is Mr. W. Farnsworth's natty home and well kept orchard. His Jonathans, Yates, and Grannies have a high reputation in the Victoria Market.

On the rise overlooking the Bass Strait and Westernport is Mr. A. Noel's property, 20 acres are planted with Apples. Jonathan, as usual, outnumbering the others. Rows of giant pines shelter the orchard, and well kept cyprus hedges, the homestead and tennis court, which is a particularly fine one.

Right in the heart of Red Hill are the properties of Mr. J. E. Holland, about 65 acres in extent, with 40 under

Apples, Jonathans again predominating with a fair proportion of Romes, Yates, Rokewood and Stewarts.

In addition to being an up-to-date orchardist, Mr. Holland supplies the growers with all their business needs, such as Cresco manures, Neptune sprays, Harvey's implements, etc., insures their crops and acts for the I.F.M. in the packing and export of fruit.

Near the school is Mr. R. H. Holmes' 75 acre property; 22 acres are plant-

ed with Apples, chiefly Jonathan, Romes and London Pippins.

The Jonathan have grafts of Roke-wood for pollenisation purposes, which ensures good setting of the fruit.

This grower believes in testing several patches with manures and sprays, and will make known the result of his experiments.

For the first spot spray he uses the 10-10-100 formula.

Now that Mr. Holmes has grown-up sons to take control of the orchard, which is now in very good order, he has time to indulge in his favorite sport, hunting. He has some splendid dogs for that purpose.

The Mornington Peninsula.

Hastings, on Westernport Bay, and on the main Flinders-road to the Naval Base, was at one time a remote fishing village, is now a progressive township, served with good roads, water and electricity, and can be reached by motor from the metropolis in an hour; the tradespeople

obtain their supplies, just in the same way as the suburbanites do.

Chiefly to the west of the town are some half-hundred orchardists and mixed farmers, most of whom have good roads to their properties.

The growers possess a co-op. cool store and packing shed (served by the railway) of 34,000 capacity, which is equipped with cold air and direct expansion systems, the engineer Mr. C. Ward, is satisfied with this season's keeping results.

The Peninsula Co-op. Society has a branch store near by, which caters for the primary producer in all his business requirements.

Mr. H. G. Sprague, who is secretary to the cool store, also an orchardist, is a firm advocate of lime-sulphur for black spot spraying, stating that no other material is used by him on either Pears or Apples, and that his fruit has been perfectly clean under this system.

This may be partly due to the proximity of the sea, some of the Port-

land people have the same opinion.

The directors are Messrs. L. Watt (chairman), Orsino, D. Chapman, J. Carpenter, Les Whitten, Alex. Hodgins, and F. Unthank.

The Whitten Bros., Coolart-road, have a fine property which was purchased from the estate of the late J. R. Boulter; they are to be commended for their enterprise. This orchard is capable of yielding many thousands of cases of fruit, of which Jonathan preponderate.

Around the corner going east on Hodgins'-road, is Arthur Hodgins' place, which he has in up-to-date condition, producing high quality fruit.

The "Herstal" orchard, belonging to J. Carpenter, continues to bear good crops, year after year: this season over 16,000 cases were harvested, there are no unpopular varieties on this estate.

The late Mr. Gold's "Bunganyah," right in the town of Hastings, comprising about 25 acres, made up of several blocks, each surrounded by

a fence of 12 or more barbed wires, claimed to be hare proof, is managed by Mr. A. Edwards. The whole place is in splendid heart: King David trees about 20 years old are exceptionally fine, and are making strong growth. Every year 4 cwt. of blood and bone to the acre is applied.

Along "Gradens" Road are the Haddocks, Grieves, Stocktons, Millers, Hodgins and the Barclays. They have nice homes and healthy well-kept orchards, and vie with each other in keeping their places spic and span. Discussing pruning with J. Miller, he was very positive re endeavouring to force new spurs on his trees, and where possible cutting out the old ones.

In addition to being growers of fruit, these men are engaged in mixed farming. The cows bring in a weekly cheque, and Alan Hodgins, who has a small herd of selected cows and keeps his sheds and dairy in spotless condition, values the cow manure very highly for his orchard.

Another farmer, Fred Barclay, showed the writer his Black Leghorn fowls, Jersey cows, and Mid Yorkshire pigs, with the last named he has won prizes and blue ribbons at the Royal, Geelong and Colac, and is entering again this year and expects to have a further sequence of wins, although very busy spraying and manuring, he knocked off to explain his pets, of which he is no doubt a keen judge. The head of the stud, "Toolleen Duke," is a typical Yorkshire and is well known, but to the writer, a younger one appears to be a coming champion: this chap is particularly well furnished, and sits up like a dog and begs for Apples or sweets.

Mr. Benton, further along the road, who now has charge of the orchards of his father, is noted for the color he gets into his Jonathans; he is one of the enterprising young fruit-growers and mixed farmers, and handles large quantities of fruit each season.

Travelling along the Cemetery-road, Hastings, the first place is Vernon Borley's, one of the well known family of S. C. Borley and Sons, who is a director of the Tyabb Cool Store. Passing along next is S. Jeremiah's: he is recognised as a man of systematic methods, who grows all the useful sorts, his Democrat trees are very healthy and well shaped, this variety is a puzzle to many growers in the pruning season.

The method adopted by Mr. Jeremiah is to prune hard when the tree is young, and to cut the laterals well back to spurs later on; this checks the natural straggly habit.

The next place is that of Mr. J. Jeremiah, where success as an orchardist is quite obvious, he has his own packing shed, fitted up with grader and all necessary requisites.

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Glasgow, and W. Gosley, Hull.

Further along we come to L. Jones', who is a son of Mr. Chas. Jones, a well known orchardist of Hastings. Then on to J. S. Campbell's on one side and L. S. Tucker's opposite, these enterprising growers were carting manures and spray materials, and have an optimistic view of the fruit industry if properly developed.

Going south, Mr. B. Francis' property is reached. Here we see the useful varieties of Apples, and a well-kept orchard, the Jonathans showing well for a crop next season.

"Pine Lodge," recently belonging to the Delahaye's, was purchased by Mr. Clarke, whose sons work the place, comprised of 52 acres, 32 of which is orchard, half planted with Jonathan, the balance mostly Grannies and Romes. One son was away when the writer called, the other, Mr. M. A. Clarke furnished the information.

They are starting out methodically in poultry keeping, and have a shed of high-class White Leghorns.

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Somerville: F. Gill's, "The Lambertianas," situated on Main-road, with a fine view of Westernport Bay, comprises 57 acres, 25 are planted with fruit trees, 22 Apples, Jonathan predominate, followed by Democrat, Delicious, Granny Smith and Peasgood, the balance with Anjou and Packham's Pears; $\frac{1}{4}$ of the orchard is pipe drained. At present a heavy crop of Peas and Oats are ready for ploughing in, at the time of sowing 2 cwt. or more of super. to the acre was used, at present a ton of lime to the acre is being distributed.

Mr. Gill, who acquired the property twelve years ago, was previously a Huon (Tas.) grower, and before that, in South Australia, and the experience gained has been put into practice on this place. He believes in hard pruning and thinning, but does not go to extremes.

From the beginning the trees have been kept low thus eliminating waste of energy, but the leading limbs are at such an angle, as to make cultivation right up to the trunks possible. Spraying has been systematically carried out, consequently the orchard is as free from pests, as humanly possible—In addition lures are used for Codlin.

The property adjoining on the East is "Southmead" belonging to A. E. Butler, of 30 acres, 12 orchard, mostly Jonathan—In addition a choice flock of White Leghorns are kept, in well appointed houses and open to free range—Everything here is done with military precision and neatness.

Further South is the "Paramount" Orchard of A. E. Dennett, this is a 40 acre property, 20 acre orchard of good varieties, here again Jonathan is supreme.

His daughter "Rosie" (now Mrs. Stockton), won the special prize and ribbon at the Royal 1930 for the best packed case of fruit—This was sent to "His Majesty" the late King George—Hard pruning is adopted with orchard manure and fowl manure from his own pens, well ploughed in, this makes for healthy vigorous growth.

The Misses Dennett have a snug shop, on the road where fruit, eggs, cream, and drinks can be obtained by tourists. These are products of the farm.

Eramosa-road is probably the chief thoroughfare in Somerville, where trees are planted to commemorate the soldiers of the district who served in the Great War. Each Digger's name

is neatly painted on a post in front of his tree; further along is the State School, with its neatly-kept gardens. Situated on this road is C. Barber's property, of 100 acres, 50 of which is orchard. Only the profitable sorts of Apples, Pears, and Apricots are grown.

Mr. Barber told the writer that if he were planting anew the varieties would be Jons., Stewarts, Grannies and Dels., with Pears, W.B.C., Packhams and W. Cole. He is a firm believer in manuring for green growth to plough in. He varies his manures from year to year.

The Somerville Cool Store, of 25,000 space capacity, whose engineer is Mr. Hilton, is under the "cold air" system, with one chamber "direct expansion," for Pears. T. E. Butler is secretary, T. W. White (Chairman), H. H. Hawker, C. T. Isles, G. Shepherd, and G. A. Grant directors. The management intend to convert the whole to "direct expansion."

Red Hill.

"The Devon Orchards Pty. Ltd.," comprising 250 acres of exceptionally rich chocolate soil, situated in South Red Hill, is the property of Messrs. Jarman and Sons; about 100 acres is planted with fruit trees, mostly Jonathan and Delicious, all of which are showing strong, healthy growth, and for a number of years have yielded heavy crops of A1 quality.

There is a staff of eight regularly employed, with additional help during the peak period.

The packing shed is equipped with a "Lightning" grader, driven by a $1\frac{1}{2}$ h.p. petrol engine, a Lidding press and wire-tying machine.

The spraying outfit consists of 250-gallon oak vat, mounted on four wheel transport (9-in. tyres), with independent petrol engine, rigged at the rear, its sole purpose being to work the agitator. Mounted on the front end of transport is a high-pressure American spray pump, working four hoses at a pressure of 300 lb.-350 lb. per square inch. The pump is driven from the tail shaft of a 25 h.p. McCormick Deering tractor, that is used to draw the spray outfit.

All timber for building purposes and case making is grown on the property, the trees, after being felled, are drawn to the saw mill, on the property, by tractor, and there sawn into building material and case shooks, by circular saws, driven by another tractor, fixed up as a stationary power plant.

A notable feature of the plant is the well-equipped workshop, with forge, anvil, drilling machines, emery wheel, stocks and dies, with tools too numerous to mention.

There are several power ploughs, harrows and cultivators, all tractor worked, also large International motor truck for carting the finished article to market. The homestead is a modern brick one, and would be the envy of many a suburbanite, with nicely designed flower gardens and lawns. There are many wind breaks of huge Pinus insignis and Lambertianas surrounding the properties, with new plantations of pines for future use.

C. W. Barker, of Main Ridge, Red Hill, has a nice property of 100 acres, hills and gullies. 20 acres are planted with orchard, mostly Jonathan; for some years his average crop has been 6 bushels per tree, from the mature ones.

He also keeps sheep, cattle and Yorkshire pigs, and is very enthusiastic about his enterprise.

G. M. Wilson, of Red Hill South, has a property of 117 acres—34 being orchard, known as "Sunnyside." These are Jonathans, Romes, Grannies and Yates; heavy crops have been harvested for many years, as high as 22 bushels per tree have been gathered. Here, again, has been erected a new modern brick residence, surrounded by beautiful flower gardens, and trimmed Lambertiana hedges 25 ft. high.

E. L. Trewin, Flinders-road, Red Hill, has a property of 100 acres, 22 of which are orchard. The principal plantings are with Jonathan Apples, Keiffer, W.B.C. and Josephine Pears, the last-named were kept in perfect order out of the store until quite early Spring.

He recently sold one of his pines to the local saw miller for £3/15/-, standing, the miller leaving tons of limbs, which were of no use to him. This is just a sample of the trees in Red Hill. Of course, the natural timber is Messmate and Peppermint. The Red Hill Co-op. Cool Store, of 30,000 case capacity, has had a successful season, the fruit keeping well under cold air.

Arthur Millington is the engineer in charge; T. E. Butler Secretary; Geoff. Brown Chairman (now in England), R. Woodward Acting Chairman; G. Laurissen, R. Sheehan and G. M. Wilson Directors.

This store like others on the Peninsula, was filled this season. All these stores are now about one-third full, and packing is in full swing for Interstate markets.

Re-working of Fruit Trees

Demonstration at Vermont.

Mr. D. C. Black, of Pakenham Upper, gave a demonstration of re-working fruit trees, using a wedge-graft on the existing spurs. Some of the advantages claimed for this method are:—

1. That the tree is in no way opened to infection of that dreaded fungi, Polystictus, which is taking such a heavy toll of re-worked trees, as no incision or break is made in the thick bark of the leaders, which are the principal sources of infection.

2. That the best results can be obtained during the months of July, August and September. The advantages of this must be apparent to all orchardists, as besides having such a long period in which to work over, it is done during the slack period, rather than when one is busy with Spring spraying, which means that either the grafting or spraying will suffer in consequence.

3. The frame of the tree is not altered, but is refurnished exactly as it was, without any fear of injury. At the worst, if any scions should not take, the dormant buds at the spur base will force a lateral growth, which can be worked over the next Winter.

4. The tree can be changed over any number of times without fear of injury, or with the loss of only one year.

5. The wedge graft is the quickest and simplest graft that can be used, and is equally satisfactory in the union. Mr. Black tied with raffia grass and sealed with Shell grafting mastic H, but for Winter work Shell grafting mastic F is recommended. It is a lighter compound, easier to apply, and the scions are calloused before

any weather, warm enough to cause the compound to run, is experienced. For work, say, from middle of September onward, the heavier mastic is recommended.

CHANGING THE VARIETY OF TREES.

Demonstration at Bacchus Marsh.

A demonstration was held at Bacchus Marsh on September 29 in the orchard of Mr. Spurr. Practically the whole of the orchardists of Bacchus Marsh were present, and a demonstration was given in the changing of the variety of fruit trees. The officers present were:—Messrs. E. E. Pescott, F. J. Groatorex, and E. Fankhauser.

The modern methods of reworking trees were demonstrated, and after the demonstration many growers experimented with the work themselves.

Visits were made to most of the surrounding orchards, and the excellent growth of the trees, particularly the Peach trees, in the orchard of Mr. Verso, were commented on favorably.

In the evening, Mr. Pescott gave an address to the growers on the instructional work of the horticultural division of the Department of Agriculture.

VICTORIA.

Quantong: Frosts did much damage to fruit crops, heavily reducing Apricots, Peaches, Currants and Sultanas.

Best Market Prices

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Value of Oxygen on Roots

INTERESTING TESTS WITH TOMATOES

Soil air has a great effect on the Tomato crop. We could not understand why the Tomatoes planted at the ends of a house always did so badly. At first we thought it was the cold winds which found their way through the door, which faced the north, but even when the inside was lined with hessian canvas the trouble would occur, says the "Fruit, Flower, and Vegetable Trade Journal" (Eng).

The appearance of the plants to which we are referring was like this. They were thin, hard, and had a hard stunted look about them, and some of them would die. We had partly made up our minds that it was the cold, and yet it seemed difficult to understand, because a flow and return pipe was across the end. One year, after the houses were planted, plants in 60's for another lot of houses were stood between the planted rows, and now another curious thing happened, for the plants in about four rows

near the cold water tap went exactly the same as the end of the house. This seemed to indicate that in fetching the water from the tap to water the 60's, the soil was trodden down firm, and that was the cause of the trouble, and this supposition proved correct, and we then learned that the men who worked in the houses always came in at the top door, even if they were going into one of the other houses, and so the soil at the end of the first house was trodden hard, and the next houses less hard, but still sufficient to show a bad effect.

We have written this to show the bad effect on growth of the consolidation of the surface of the soil, and thereby making it more difficult for the air to get in or out of the soil.

Planting out is going on everywhere, and this will be followed by staking and stringing. By the time these operations are finished, the surface of some soils may be made more

firm than is good for the roots, and if it is it will make a lot of difference if just the surface is broken up with a trowel or very short fork.

Realising that a firm, trodden surface is bad is one of the reasons which made us plant out in rows 18 inches and the next 2 feet 6 inches, for this kept the workers to treading only in the wide rows, and off the soil in the narrow ones. The stakes are, of course, put in 3 inches away from the plants in the wide rows, and so the plants now grow up in rows 2 feet apart. It has an additional advantage, and that is that, if, owing to pressure of work, the surface cannot be picked up, half the soil is in a loose condition at the surface.

There is a short passage on page 43 of Marshall Ward's book on "Diseases of Plants"—by the way, this is one of the best books we have ever read on this subject, although it was published many years ago, and a fairly comprehensive knowledge of botany and some chemistry is needed to follow the writer—which is well worth quoting:—"The functions of the roots may be arrested by removing

the oxygen from the soil around the root hairs and replacing it by carbon dioxide. If not kept too long in such a condition, the plant recovers rapidly on admitting atmospheric oxygen. If the access of oxygen is delayed, however, as often happens in rainy conditions, and in wet soil, the root hairs are killed and rot sets in." On page 104 he says: "Diseased conditions of the roots often result from deficiency of oxygen at the root hairs, due to imperfect aeration of soils, brought about by stagnant water, excess of animal matter, and so forth."

The soil we use is usually well manured and contains a fairly large amount of easily decomposed organic matter. The bacteria and fungi, breaking down the latter, cause the formation of a considerable amount of carbon dioxide in the soil, and at the same time a reduction of the oxygen. So long as the atmospheric air can gain free access into the soil, the natural interchange of gases will keep things normal, but if anything impedes this natural process, then there is trouble. Many of the things now being brought forward, like soil heating straw in a vertical position, etc., are showing the value of a free interchange of air on a healthy root system.

EAT MORE VEGETABLES.

Publicity to Increase Sales.

In an attempt to create increased sales in fresh vegetables, the Flowers, Plants and Vegetables Publicity Committee in London have prepared publicity matter that will be widely distributed throughout Great Britain.

Believing that more vegetable dishes would be prepared if housewives became more acquainted with such preparation, a booklet setting out numerous recipes has been printed for free distribution. Salads are featured, and a recipe for each week is shown for vegetables in season. The preparation of vegetable dishes is neither elaborate nor expensive, and it is expected that increased consumption of fresh vegetables will result.

POTATO PROSPECTS.

Government to Compile Monthly Reports.

The early crop of Potatoes in Victoria is about 10 per cent. below last year's acreage, which was 42,800 acres. An estimate of mid-season plantings is not yet available.

In order to provide information of crop conditions and prospective harvests, the Department of Agriculture has arranged to issue a monthly report based upon information provided by Departmental inspectors and voluntary crop correspondents in their respective district.

This proposal follows similar action in U.S.A., which has been found to be valuable to growers as indicating what crops other producing districts are likely to obtain. This system is stated to be an asset in orderly marketing, and therefore a benefit to all growers.



THIS CROP WAS SAVED BY PESTEND SUPERFINE (TOBACCO DUST)

"Look fine, don't they?" said Mr. Short, waving a hand over 100,000 big, healthy Cabbages.

"Yet green, grey, and flying aphids nearly had the lot. Pestend Superfine, used in the spray duster, quickly destroyed them, however, and I expect a very successful crop."

"Yes! You can repeat this conversation, and add, too, that Pestend spreads and adheres better, acts quicker, lasts longer, and costs less than ordinary spraying powders."

Follow the lead of expert gardeners and growers, who have proved that Pestend Superfine (especially when mixed with lime) is a sure protection against crop-destroying insects. Pestend Superfine Tobacco Dust is non-poisonous to plants, inexpensive, and easy to use. Try it out yourself!

Obtainable in 4 lb., 28 lb., and 1 cwt. bags at all produce stores, or direct from W. D. & H. O. Wills (Aust.) Ltd.

Rotation of Vegetable Crops

As a Factor in Disease and Pest Control.

DISCUSSING in the "N.S.W. Agricultural Gazette" the possibilities of vegetable production in inland districts, a departmental instructor emphasises the importance of rotation of crops. It is surprising, observes the writer, that growers do not appreciate more the value of an efficient rotation system. Of the many advantages to be gained by arranging the crops so that they follow one another in their proper sequence, one that is often lost sight of is the part it plays in the control of plant diseases and insect pests.

Such diseases as the root rots, black rot and club root of crucifers and root knot (eelworm), to mention a few that are carried over in the soil, may be partly or wholly controlled by adopting suitable rotations. The control of many of our insects largely depends also on proper crop arrangement, as well as clean cultivation. The Tomato Mite attacking an early crop of Tomatoes, for example, may be carried over to a late crop planted on the same land. The absolute control of Cabbage worm is dependent upon, among other things, the complete destruction of crop remains and avoidance of a succession of related crops, e.g., Cabbages after Swedes.

As the Tomato Caterpillar may also breed in growing Maize, it is not advisable to follow this crop with Tomatoes. The Bean Fly, which is such a serious trouble with Autumn Bean growers in coastal districts, and which has no other known host than the Bean plant, is a good example of a pest which it is possible to control by correct crop arrangement and clean cultivation.

One American writer dealing with rotations and cropping systems generally, classifies the various rotations into three types:—

- (1) Specialist, or continuous system.
- (2) Regulation rotation system.
- (3) The opportunist system.

Unfortunately, many of the rotations at present in vogue in this State would come in the third class—in which the crops are sown according to the dictates of the market, rather than according to any definite, well-thought-out plan.

VEGETABLES AT SEA.

Serving Oil Tankers.

In English ports, where ocean-going oil tankers are forced to anchor outside of harbors, the steel water-boats which pump fresh water into the larger vessels, also carry fruit and vegetables for the tankers' supplies. The old days of pickled vegetables are, fortunately, past, and nowadays, crews of even such dangerous vessels as oil tankers are assured of regular supplies of fresh vegetables.



"Plane" Brand Dusts

"Beauty" (Knapsack) Dusters
"Superior" (Rotary) Dusters

ARE MANUFACTURED BY

N. N. McLEAN Pty. Ltd.
395 Queen Street
MELBOURNE

Fertilisers for Tomatoes

Plant-food Requirements of the Crop.

ALL EXPERIMENTS WITH TOMATOES, states a N.S.W. Departmental pamphlet, have shown the need of the plant for phosphoric acid in some form or other, and the fertilisers which best supplies this plant-food in a readily available form is superphosphate. The

value of superphosphate

lies in its effect on root development, increase in which means increased feeding capacity. It tends also, however, to early maturity. Superphosphate should be applied preparatory to planting, at the rate of 2½ to 3 cwt. per acre under ordinary farming conditions. Under irrigated conditions up to 5 cwt. may be applied, or, if the soil is of a very sandy nature, a mixture of 2½ cwt. of superphosphate and 2½ cwt. of bonedust.

Nitrogenous fertilisers are also valuable, but they must be used with discretion. It has been found that manures supplying nitrogen are in the main best applied after the setting of the first fruits. Earlier application may cause an over-vegetative top growth, which, besides making the plants more susceptible to disease, may also hinder setting of the fruit. Later applications are helpful in the filling of the fruit.

TOMATO DISEASE.

Reported in Victoria.

A wilt disease which attacks Tomato plants and is known as Bacterial Canker, has made its appearance in Victoria according to officers of the Department of Agriculture. Although known in U.S.A. for many years, it has never before been noticed in Victoria. The officers advise that the first symptoms appear on the lower leaves and the disease spreads upwards, causing slow wilting, browning and dying of the leaves.

If an infected leaf-stalk or stem is cut, a yellowish discoloration will be noticed, and in later stages cavities in the stem may develop. In wet seasons there may be spotting of the fruit.

The importance of saving only seed that is from disease-free plants is stressed, and as a further safeguard, they advise extract by fermentation. Should the origin of the seed not be known, it should be treated with mercuric-chloride, ½ oz. in 5 galls. water, for 5 minutes and then washed in clean water for 10 to 15 minutes. Destruction of diseased plant material and crop rotation are also recommended as a means to eliminating soil infection.

Hints for the Approaching Fruit Season

By E. W. Thompson, Sec. Melbourne and Metro. Retail Fruiterers' Association

ON the eve of the approaching fruit season, which promises to be a bounteous one, a few suggestions from the retailer's point of view might assist in disposing of the harvest advantageously.

Berry Fruits.

We will begin with the berries which are already making an appearance on the market, and every person who sells them, both grower and retailer, should do their utmost to push the sale of same by whatever system of publicity they may consider most satisfactory, particularly stressing the point to their customers that the season of each variety is of such short duration that, to save disappointment, they should take advantage and secure their supplies as early as possible. Every year retailers are frequently asked for various kinds of berries and other fruits by dilatory housewives long after the fruit is finished. Some invariably put off the making of their preserves and other things as long as possible. The same remarks apply to jam fruits of every description, retailers should know just when the various varieties will be available and should endeavor to get their orders booked up previously.

Cherries.

The Cherry season is just on us also, and it may be a big assistance if more growers adopted the 12 lb. boxes used in adjoining States in the marketing of this variety of fruit. Last season one or two metropolitan growers did adopt that system, with satisfactory results, and as it requires very little trouble or expense, possibly we will see many more or these small cases in use this coming season. The retailer would also be enabled to make a more attractive display and provide a greater incentive to buy and consequently greater consumption, with advantages to all. The small box also enables the small retailer to have a larger variety, as under the old styles he is often unable to dispose of the bushel case and therefore refrains from purchasing any. Of course, the culinary varieties could very well be made up in larger parcels.

Stone Fruits.

Plums, Apricots, Peaches, etc., can be made to look more attractive if firm cases and white paper are more freely used. One need only to see a case of Grapes opened to see the effect of white paper instead of the other.

Selling by Number.

Although some publicity has recently been given by the daily papers to the selling of fruit such as Apples, Pears, Peaches, etc., by number instead of by weight, as at present, there does not appear to be much pos-

sibility of the alteration being brought about without the wholehearted co-operation of all sections of the fruit industry.

In all the other States and on the stalls on our own railway stations, and also a few retail shops, the number system is in vogue, and the consumers, the persons who must be studied, are all quite satisfied, then why is there such apathy by all the parties concerned when united effort should undoubtedly be made to affect the change.

Publicity.

A publicity campaign is about to be inaugurated to endeavour to educate the public of the value of a greater consumption of fruit as a food instead of being thought of as a luxury as at present, but before doing so every effort must be made to effect this change. The housewife or the guest-house proprietor or any other person knows quite well the number of fruit of this description they require for their household, then why not endeavor to suit their requirements. One never hears of Oranges or Bananas asked for by the pound, and there is no reason why Apples and Pears should be.

Past experience has proved that the grower who grades his fruit properly for market has no difficulty in selling same, but the grower who markets his fruit in a haphazard way is generally to be found with fruit left when the others have sold out. Compulsory action seems to be the only way to compel the apathetic and careless members of the industry, both growers and retailers, to fall into line and be more progressive and assist to lift the industry out of the mire it is unquestionably in.

Road Selling.

As the indications facing us are heavy crops with a limited market overseas and interstate, every effort will have to be made to develop our home market in the most profitable way. This will be greatly hindered if those growers who have been permitted in the past to dispose of their rubbish on the roadside during the weekends are allowed to continue. This can be greatly curtailed if genuine growers with the interests of the industry will compel the authorities in their respective shires to take drastic action against these offenders. The class of fruit usually sold by these vendors should be used up for factory purposes and by so doing a far more remunerative price could be obtained for the better class of fruit.

The shires of Mulgrave, Mordialloc, Fern Tree Gully and Lilydale have already taken action to curtail this roadside selling, and why should others permit the roadways to be turned into market-places?

EARLY CLOSING OF FRUIT SHOPS.

Fruiterers' Object.

The suggestion that action be taken in Sydney to enforce the early closing of fruit shops is causing much opposition by retailers. Meetings have been held and proprietors of fruit shops in the Metropolitan Area are organising to fight the proposals.

It is pointed out that if the proposed hours are observed—Monday to Thursday, 7 a.m. till 7 p.m., Friday and Saturday 7 a.m. till 11 p.m., and closed all day on Sundays and holidays—losses of perishable fruits will be incurred, as most fruits would be unsaleable by Monday.

AT LAST!!!

A Safe and Efficient Non-Poisonous Insecticide for Dry Dusting.

COOPER'S

DRYMAC Standardised **DERRIS DUST**

KILLS CABBAGE GRUB, APHIS, THRIPS, ETC.

Simply dust it over the affected plants.

112 lb. Bags 9d. lb.; 56 lb. Cases 10d. lb.; 7 lb. Bags 11d. lb.; 2 lb. Cartons 2/3 ea.; 1 lb. Cartons 1/3 ea. Wholesale Prices on Application.

Sole Manufacturers:

William Cooper & Nephews (Australia) Ltd., Sydney
Victorian Distributor—F. R. MELLOR, 440 Elizabeth Street, Melbourne.

CANNING AND JAM FRUITS

Board's Annual Report

Outstanding Season.

Apricots and Pears Create Records.

As we go to press we have only a short review of the Canned Fruit Control Board's annual report, which was tabled at Canberra on October 22. The report states that, from the point of view of the growers of Apricots, Peaches and Pears, the 1936 canning season was the most outstanding and successful for years. The Apricot pack of 379,435 cases was the largest on record, exceeding the 1935 pack by 105,075 cases. The Peach pack, however, declined by 67,829 cases, while the Pear pack reached record dimensions, exceeding the 1935 pack by 308,624 cases. The aggregate pack of 2,221,429 cases was also a record, the previous highest being in 1933 with 2,039,679 cases. The canned fruit trade with distributing centres other than London has increased from 11 per cent. of the total Australian shipments in 1928 to 37 per cent. in 1935.

Canada Shipments Increase.

Exports to Canada in 1935 increased by 22,950 cases over 1934, and by 48,306 cases over 1933, in spite of developments in Canadian local canning. The 1936 season will exceed that of 1935 in volume to Canada. Although U.S.A. has received a reduction of duty, in respect of her canned fruit into Canada, of 1 cent per lb., Australia was extended a similar concession under the Australia-Canada trade treaty. At present the preference to Australia is satisfactory and trade is expected to extend unless depreciation of the American dollar occurs.

Pineapples Decrease.

A decided drop in exports of canned Pineapples has been experienced during the past 18 months, continues the report. This has been because of lack of suitable fruit rather than a decreased demand from overseas markets. The fact that 1936 crop was light and almost the whole of it was required for an understocked local market so that only 2,135 cases were available for export in the first half year. With three seasons reporting shortage, a weakness in production methods is charged in the report, and the advice that this factor should be remedied in order to retain existing markets.

The British Market.

"A case for more effective preferential treatment on the British market was prepared by the Board" at the Empire Fruit Producers' recent London conference, concludes the report. This was advocated by Mr. A. R. Townsend, leader of the Board's delegation. It is gratifying to learn that the case for Australia was endorsed by all other Empire countries represented on the sub-committee and was later adopted by the conference.

U.S.A. EXPORTS, 1935-36.

Peaches Largest Variety.

Packing in U.S.A. is observed during the period from June to September, although shipments may not be made until the later months. The export season is therefore reckoned as from July to June.

The 1935-36 figures show a total average increase of 44 per cent. over the previous year, and 32 per cent. over the average for the past five seasons. This represents in the case of 1935-36, an increase of 925,200 cwt. in volume, or approximately 2½ million cases.

All varieties, except Loganberries, shared in the increase. Apricots made the greatest increase, and were two and a half times the quantity of 1934-35. Peaches more than doubled, Pears increased by 15 per cent., Pineapples by 24 per cent., Apples by 60 per cent., fruit salad by 18 per cent., and Grapefruit by 20 per cent.

Taking the total of all canned fruits exported from U.S.A., 1935-36 broke all records. The figures for each of the past seven years, without decimals, and expressed in thousand hundredweights, were:—1929-30, 2,542; 1930-31, 2,420; 1931-32, 2,281; 1932-33, 2,130; 1933-34, 2,658; 1934-35, 2,114, and 1935-36, 3,039. Of the receiving countries Great Britain, with 2,690 thousand cwt., took over eight times the quantity of all other countries combined.

Expressed in percentages of total exports, Great Britain received the following quantities:—Grapefruit, 96; Pears, 94; Peaches, 92; Apricots, 90; fruit salad, 90; and Pineapples, 42.

CANNING IN BRITAIN.

Production Doubled.

THE 1936 canning season in Great Britain closed with a large increase of production. The Ministry of Agriculture's report, issued at the end of August, estimated that the Plum crop would be double the normal volume, and since Plums provide the most important crop for canning, it was an indication of the general position.

Of the £1,000,000 worth of fruit used for canning in Great Britain, representing approximately 500,000 cwt., Plums provide 145,000 cwt., with Raspberries and Gooseberries following very closely in quantity. Even with British factories processing huge quantities of small fruits, they only supply one-eighth of the enormous supplies of canned fruits which consumers in Great Britain require every year.

In an attempt to meet this enormous import requirement, some canners are now importing pulped fruit in bulk, and converting it into fruit salads, which are achieving increased popularity.

Whereas in 1927 there were only 23 canneries registered in Great Britain, now there are 75 factories employing 200 hands or over, engaged in various forms of fruit canning and processing. Canneries pack about 70 million cans of fruit in a normal season, requiring 75,000 tons of Welsh tinplate, and it is anticipated, as increased planting now being done come into bearing, that the canning of home-grown small fruits will materially increase.

CANNED PEACHES.

Export Prices Advanced.

Threepence per dozen advance for 30 oz. tins and 1½d. per dozen for 16 oz. tins sold on export markets is announced by the Canned Fruits Control Board. This brings the minimum prices up to 7/4½ per dozen C.I.F., for 30 oz. tins and 6/7½ for standards.

The advanced prices brings Australian canned Peaches in line with Californian quotations, which are rising. Extension of the date for closing N.Z. shipments was made up till December 31.

CANNED FRUIT EXPORTS TO SEPTEMBER 30.

Exports of canned fruits from Australia to various destinations from the commencement of the season, January 1 to September 30, are seen below. The figures quoted represent dozens of 30-oz. tins or equivalent:—

Country.	Fruit					
	Apricots.	Peaches.	Pears.	Salad.	Pines.	Total.
U.K.	258,594	865,972	678,544	—	6,975	1,810,085
N.Z.	18,906	19,182	2,058	34	3,564	43,744
Canada	22,474	147,478	15,600	6,520	17,940	210,012
East.	5,826	12,786	9,994	1,704	96	30,406
Misc.	1,018	2,364	3,158	60	466	7,066
Total	306,818	1,047,782	709,354	8,318	29,041	2,101,313

ARE YOU

GRUBBING?

Previous experience had convinced me that to be really efficient a grubbing machine should have ample power and ropes that will meet the heavy demands required of them. I found that shovel and axe work is very costly either by itself or in conjunction with a machine. The machine that offered these features, with a host of others, was THE "MONKEY" GRUBBER.

It gave me the power of 260 pairs of hands in a simple and compact form; the lever is short, so that I am able to stand firm-footed and get the full stroke. There are two speeds in the machine, as well as an automatic release that allows me to let off a strain, or as the machine will work in any position, it comes in for all jobs that would require a chain block. It is taken to the job on a pair of wheels like a barn truck, and is rigged for work in a few minutes. The ropes are in lengths that I find easy to handle, and each one is fitted with hook and loop couplings, so simple and absolutely IT for effectiveness. The makers have included a sturdy snatch block with a novel method of securing to the ropes, and also a fine type of firm gripping rope shortener. The latter makes it very easy to accommodate the lengths of rope to the tree or stump being pulled, and is quickly released from the rope. The combination of so many time and labor saving features makes the "Monkey" Grubber a superior grubbing outfit.

REMEMBER FOR YOUR GRUBBING THERE'S ONLY

H. H. HINDS,
225 Clarence Street,
Sydney.

A. G. WEBSTER
& SONS,
Hobart & Launceston.

TREWHELLA'S



MONKEY GRUBBER

A. ROBINSON,
821 Ann St., Brisbane

Leading Stores and
Merchants, South and
West Australia.

TREWHELLA BROS. Pty. Ltd. Trentham, Vic.

Motor Cars, Trucks, Tractors

PRESERVING CHROME FINISH.

THE modern car body, with its graceful lines, lacquer finish, and chrome-plated parts, requires a good deal of attention on the part of the owner if it is to retain its polished appearance. Some hints on preserving the finish of the chrome and nickel plated parts may be of service to the Chevrolet owner.

It should be borne in mind that rust is always liable to attack the metal plating, and precautions should be taken to protect it if the car is touring a seaside district, or by mountain streams, where it may be left out in the open for the damp to cause rust. Petroleum jelly is the best rust preventive. It is smeared with a rag liberally on the metal surfaces, particularly on those parts where water may lodge, such as clips, bolts, round the windscreen channels, the bottom portions of the radiator shell, etc. Superfine whiting is used on another rag to polish the metal.

A great deal of dirt contains soot, clay, iron oxide, and calcium chloride, which, if allowed to remain on the plated surfaces, will tarnish, and possibly rust the metal. It is best clean-off with a damp cloth, and polished with a dry cloth.

If parts become rusted through neglect they should be treated with a mixture of phosphoric acid and water in the proportion of one part to two, painting the mixture on to the affected parts with a brush until the rust disappears. The chrome plate is then washed with cold water, and rubbed dry. Never use kerosene for cleaning rusted plated surfaces. If a further protection is desired for treated surfaces, clear lacquer may be added to them.

FAN BELT ADJUSTMENT.

The fan belt seldom receives the attention it deserves from the owner. Slipping of the belt, as a result of an accumulation of grease and oil, or through normal wear, may result in the engine overheating.

Examine the belt occasionally to see that it is functioning normally. If it is greasy, wash it with petrol and a stiff brush, wiping it clean with a cloth. On the Chevrolet a worn belt can be tightened by loosening the bolt at each end of the generator base, and the clamp bolt passing through the slotted adjusting link. The generator is then pulled outward, taking up most of the slack in the belt, and the bolts tightened to hold it in that position. When the belt is properly adjusted it should give $\frac{1}{2}$ in. with a slight pressure in the centre. If it is tightened too much it will cause excessive wear of the water pump and generator bearings.

A SURPRISE.

He was at the fountain-pen counter making a purchase. "You see," he said, "I'm buying this for my wife." "A surprise, eh?" "I'll say so. She's expecting a motor car."

PRESTON MOTORS OPEN NEW SERVICE BRANCH AT FOOT-SCRAY, VIC.

Preston Motors Pty. Ltd., the metropolitan distributors for Chevrolet and Buick, opened their new Footscray branch at the corner of Leeds and Hopkins streets, on October 12.

These premises have been erected for the purpose of providing specialised local services to the many Buick and Chevrolet owners in Footscray and the surrounding district. The service station has a floor space of 10,000 square feet, and has been specially planned and laid out in accordance with approved modern practice to render quick and efficient service to car and truck owners.

In addition to the very latest garage equipment, including the latest Lincoln greasing plant, with five special guns, four-ton hydraulic hoist, automatic air plant, latest electric Black and Decker value refacing machines, electric drills, pneumatic valve grinders and tools, etc., a complete equipment of General Motors-Holdens' specialised Buick and Chevrolet tools, recommended by the technical engineers of the American factories, has been installed at considerable cost, which will enable the mechanics at the Footscray Branch to render a specialised service to Chevrolet and Buick owners which is not obtainable at any other service station in the metropolitan area.

Mr. W. Walkenden has been appointed manager of the branch, and, in addition to his qualifications as a competent mechanical engineer, Mr. Walkenden has received a specialised training at General Motors-Holdens' Service Training School, as have also the two mechanics who will serve under him.

This Footscray Branch is the latest link in Preston Motors' plan of decentralised service stations, and the company has almost completed the circle of suburban service branches to be established as supports to their main service stations at Spencer-street and Franklin-street. A complete stock of genuine General Motors-Holdens' spare parts and accessories is available to meet the requirements of the trade and public generally.

CENTENARY MOTOR RALLY.

Two Classes of Cars.

The big motor rally organised as one of the attractions of the South Australian Centenary celebrations has provided for two classes of cars:—Those under 1,500 c.c. engine capacity and those over 1,500 c.c. capacity. Competitors will start from Sydney, Melbourne, Perth and Broken Hill, and will converge upon Adelaide via different optional routes. The distances announced are from Perth, 1,776 miles; Sydney, 1,151 miles; Melbourne, 946 miles, and Broken Hill, 520 miles. This rally will be a test of cars and drivers, and will be judged upon a carefully thought out system of points.

RATTLING DOORS.

Apply a Spot of Oil Occasionally to Door Hinges.

Rattling car doors often are the result of thoughtlessness on the part of the owner of vehicles, the trouble being the outcome of stiff door hinges.

Not one motorist in a hundred ever thinks of putting a drop of oil on the door hinges of his car, the outcome being that the hinges become stiff and rusty, and the openings and closing of the door throws excessive stress upon the screws that secure each hinge to the frame of door and door pillar.

The screws are also liable to loosen, leaving the door free to rattle. A spot of oil applied occasionally to

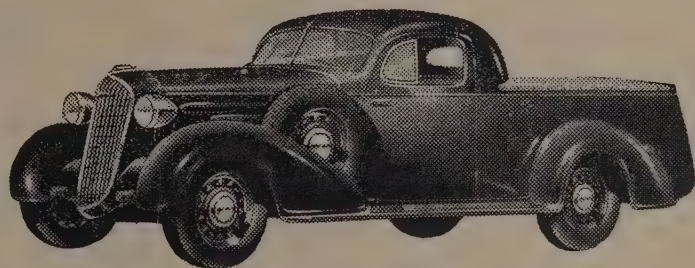
each hinge will tend to prevent such defects, and obviate the irritating noises they set up.

BATTERY AND COIL IGNITION.

The only moving parts with this type of ignition system are the contact breaker and distributor. Both these parts require the very minimum of lubrication, but it is very important that the neck bearing below the distributor housing obtains an adequate supply of lubricant.

The contact breaker points in the distributor must be kept clean and entirely free from oil. Two or three drops of oil at the fulcrum pin of the contact breaker and also on the spindle of the distributor every 1,000 miles is all that is required.

Save Money with Chevrolet The Cheapest Full-Sized Utility



Illustrated is the Chevrolet "6" Open Delivery with Coupe Front.

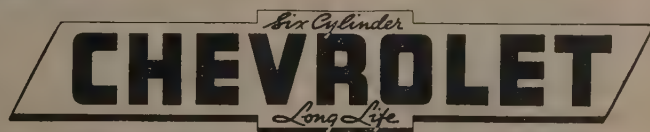
When you own a Chevrolet Utility it saves you money—on the day you buy and every mile you drive. The fact that Chevrolet is the lowest-priced full-sized utility is your first saving. Then, you'll find that Chevrolet is the lowest consumer of oil and petrol you've ever had. Next, you'll realize that Chevrolet is the most powerful in its price-class. And, finally, when you own a Chevrolet, its utter dependability, long life and low maintenance cost will satisfy you of your wisdom in buying it, as it has satisfied more than two million owners throughout the world. Before you buy your next utility come in and try the latest 1936 Chevrolet.

Chevrolet Trucks Win Praise of Their Owners

Read What This Owner Says:—

"In 1930, I bought a 6-cylinder Chevrolet truck, and I think it only fair to tell you of the wonderful run I've had with it. After 85,000 miles of gruelling work, it still gives 15 to 16 miles to the gallon with a 30 cwt. to 2 ton load over a 'give and take road.' A gallon of oil does for from 900 to 1,000 miles, and repairs to date have cost less than £5."—A.W.U., Corowa.

The Chevrolet engine is a real worker, built for long life and hard toil. Its full-length cylinder-cooling, thermostatic heat control, crankcase ventilation, spray-cooled exhaust valves and pressure steam lubrication are among the features which make it the longest-lived of truck engines. The Chevrolet engine is built to last the life of the truck. Chevrolet Trucks range from the popular 30-cwt. model to the 5-ton Mapleleaf semi-trailer.



Sold and Serviced by Chevrolet Dealers throughout Australia.

Metropolitan Distributors:

PRESTON MOTORS PTY. LTD.

114 Franklin Street, Melbourne

Export & Commercial News

CALIFORNIAN FRUIT CROP.

Conditions Suggest Lowered Production.

FOLLOWING the extreme drought conditions that prevailed in many coast districts and in other States in U.S.A. during the past Summer, it is estimated that the fruit crop will be well below normal. A brief survey of the latest report issued by the U.S. Department of Agriculture shows the following corrected estimates for California. Almonds: decrease to 7,500 tons as against 9,300 tons in 1935. Apples: 8,694,000 bushels (9,889,000 bushels). For the whole of the States the estimate is now set at 105,856,000 as against 167,283,000 bushels in 1935. Apricots: increase to 223,000 tons (216,000).

In estimating the citrus crop for the chief producing States as at September 1, the comparison (with the previous four years in brackets) is now: Grapefruit: California, 73 per cent. (76, 69, 75 and 71). Arizona: 69 (89, 80, 84 and 82). Florida: 72 (52, 77, 71 and 56). Texas: 71 (34, 37, 65 and 29). Oranges: California, 77 (74, 69, 57 and 71). Arizona: 65 (88, 77, 80 and 84). Florida: 74 (59, 79, 79 and 65). Texas: 76 (42, 43, 71 and 42), and Louisiana: 95 (80, 90, 80 and 85). Lemons: California, 75 (67, 77, 71 and 71). Limes: Florida: 76 (64, 73, 77 and 73).

Californian Peaches have not suffered and the present estimate shows: Clingstones, 307,000 tons (288,000); Freestones advance to 170,000 tons (141,000), but owing to other States being affected, the total production from all States is estimated as 43,873,000 bushels as against 52,808,000 bushels in 1935.

Similarly Pears have risen to 236,000 tons (163,000) in California and 23,914,000 bushels (22,035,000) in all States. Prunes suffered a setback to 153,000 tons in California, as against 258,000 in 1935, whilst for all States, Washington at 1,500 tons and Oregon at 29,400 tons, compare with 6,100 and 33,500 tons respectively in 1935.

Producers' Distributing Co-operative Society Ltd.

Are now paying a Bonus of 10% on all Commissions charged to regular clients of the Fruit & Vegetable Section for year ending Sept., 1935

Send Your Consignments

TO US

MELBOURNE & SYDNEY.

Victorian Fruit Marketing Association

The monthly meeting of the Executive of the V.F.M.A. was held in the Board Room, Commercial Travellers' Club, Melbourne, on Friday, October 16, at 11 a.m.

There were present: Messrs. A. S. Harrison (Vice-President) in the chair, W. H. Carne, J. B. Mills, S. Brown, G. Douglas, K. Eagle, H. M. McLean, F. Moore, J. J. Tully, W. A. Thiele, J. W. Barker, E. Russell, F. Cave, H. G. Sprague, S. P. Cornish, J. M. Ward, A. Perry, and the Secretary, R. E. Boardman. Apology received from Messrs. C. H. Jost, W. Young, J. G. B. McDonald, M.L.A., and N. N. McLean.

The chairman tendered a welcome to Messrs. S. P. Cornish and Arthur Perry.

Federal Grant: The Harcourt Young Orchardists' Club wrote advocating an approach to the Federal Government for a guaranteed price of 6/6 per case F.O.R. for export Apples.

Mr. McLean supported the request.

Mr. Mills stated that this matter, together with other aspects of the Federal Grant, could be discussed at the Adelaide Conference.

On behalf of the Sub-Committee appointed to deal with the question of excise he reported that the following resolution had been drafted:

"That the Australian Apples and Pear Export Council be authorised to approach the Federal Government requesting that an excise be collected on all Apples and Pears sold in Australia or submitted for export in order to raise funds for maintaining and developing the industry, and particularly for the purpose of advertising to increase the Australian consumption of these fruits and the by-products of these fruits."

In moving that this item be placed on the Agenda of the Adelaide Conference, Mr. Mills stated that export markets appeared to be shrinking. The best market for Apples was in Australia, but no concerted effort had been made to increase consumption by educational publicity. The removal of a surplus of one to one and a half million bushels should make both local and overseas markets profitable. The first objective of raising funds by means of excise would be advertising; there was another point for subsequent consideration, viz., an equalisation fund for adjusting overseas and local prices.

In seconding the resolution, Mr. Moore said the funds which would be raised by a small excise per case would be substantial and would enable the advertising to be done effectively.

Mr. Thiele urged that any advertising should be along the lines of publicity for a brand of defined quality.

Mr. S. Brown stated that the present method of allocation of the Federal Grant was wrong. Pears should be excluded.

The motion was carried.

A discussion then took place on the Harcourt letter. Members pointed out certain difficulties, such as repercussions in U.K. in the attitude towards "bountied" fruit under a quota system and the varying values of varieties.

Mr. Eagle asked what progress had been made concerning the discussion at the last meeting regarding distribution of the Grant to those who had sent fruit on consignment.

Mr. Mills said that apart from the Grant of £103,000 on the basis of a flat rate of 4½d. per case, a request had been made for an additional grant of £50,000. The basis of allocation of the 4½d. grant was not yet known: this would form the subject of an Act in the Federal Parliament. The flat rate was preferred in some States because of quickness of distribution. Regarding matters of Empire policy, the confidential report of the recent Empire Fruit Conference disclosed that a resolution favoring an approach to the British Government for an increase of the preferential duty from 4/6 to 7/6 per cwt. had been adopted. This should make it unprofitable for American fruit to be placed



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in cool store in England to compete with Empire supplies.

It was decided on the motion of Messrs. Carne and McLean, to refer the Harcourt letter to the discretion of the V.F.M.A. Delegates attending the Adelaide Conference. Carried.

Plum Export: Mr. Thiele stated that recent press reports had stated certain varieties of Plums were to be excluded from export. He moved that before any decision of this nature be made the matter should be referred to the V.F.M.A.

Mr. Ward said that the tests had been conducted over a period of three years, as to the storage life of Plums, —the Plums being selected from various parts of the State. Wickson had life of five weeks, October Purple and Ballena, six weeks; Satsuma, Nararabeen, President, Grand Duke and King Billy, seven weeks; Lawford Gage, eight weeks; and Golden Drop, eight to nine weeks.

Reports from England showed that although many Plums outwardly appeared to be in sound condition, they were brown inside and worthless when reaching retailers and consumers. From information sent by the Agent-General in London, the most profitable Plums for export were Jefferson, Coe's Golden Drop, President, Grand Duke, Pickering and Satsuma.

Mr. Tully, in seconding the resolution, said Wickson Plum had been satisfactorily exported. Further tests were necessary with this and other varieties before prohibiting export.

Mr. Moore said that the wrapping of Plums for export should be optional.

Mr. Thiele stated that both Diamond and October Purple, from southern districts had been exported satisfactorily.

It was decided on the motion of Messrs. Thiele and Tully, to refer this matter to the Pear Committee. Mr. A. Perry to be added to the Committee.

Mr. J. G. B. McDonald, M.L.A.: The action of the Secretary in writing to congratulate Mr. J. G. B. McDonald on his election to the Legislative Assembly was confirmed. Cordial references were made by Messrs. Tully, Mills, and others, to Mr. McDonald's ability and forceful personality: the fruitgrowing industry would be well served by Mr. McDonald in Parliament.

Pear Export: On behalf of the Pear Committee, Mr. Moore reported that the following recommendation had been made.

Varities recommended for export: B. d'Anjou, Josephine, Madam Cole, Packham's Triumph, Winter Cole, Winter Nelis, Beurre Hardy, B. Bosc, Doyenne du Comice.

Varities on the "danger list" (for export during the next two years only, unless further included on export list after review), W. B.C., Doyenne Boscuch, Howell, Kieffer, Napoleon (Vicar of Winkfield), Elizabeth Cole, Marie Louise, William Bartlett, Glou Moreceau.

In reply to a question from Mr.

Eagle as to the placing of W.B.C. on the danger list, Mr. Moore said the variety had a short life, was variable in its carrying capacity, and even when arriving in U.K. in good condition, it met strong competition from Argentine and S. Africa.

Mr. Perry stated that the limiting of exportable varieties to the best

commercial sorts would be of benefit to growers and the trade.

Varities to be excluded from export list:—B. de Capiaumont, Black Achan, Brook Park (Eyewood Bergamot), Clapp's Favorite, Jargonelle, Giblin's Seedling, Batchelor, Nonchalard, Swan's Orange, Neverfail, Harrington's Victoria, Gansell's Berga-



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On the motion of Messrs. Mills and Tully, the report was adopted for transmission to the Adelaide Conference.

Science Officers, Department of Agriculture: Mr. Thiele said that growers were alarmed because of the weakening of the Science Branch of the Department of Agriculture. Mr. K. M. Ward had transferred to Queensland, leaving only one senior entomologist here. Other States provided higher salaries and permanent appointment. The Victorian Science Officers had no security of tenure. He moved that a strong protest be made to the Minister for Agriculture on account of the apathy shown in the matter of the retention of scientific officers in this State, further, this Association affirms that the scientific side of the work of the Department should be established on a basis comparable with N.S.W. and Queensland.

In seconding, Mr. S. P. Cornish stated that N.S.W. had 19 officers scientifically trained in plant pathology and entomology, Queensland 16, Victoria had 7, but with the transfer of Mr. K. M. Ward, the number was now 6. The motion was carried.

It was decided to place these matters before the Minister for Agriculture by deputation as early as possible, delegates to be invited from kindred associations.

Vermont Field Day: Mr. Moore spoke in terms of high appreciation of the Vermont Field Day as unquestionably the most comprehensive so far conducted. He moved that the best thanks of the Association be tendered to Mr. Beet and all who had assisted. The motion was carried.

Mr. Beet thanked the members for this expression of appreciation, and mentioned favorably the work of the Secretary.

Manure Subsidy: On the motion of Messrs. Carne and Brown, it was decided to approach the Federal Government protesting against the reduction of the Manure Subsidy from 15/- to 10/- per ton, and to request a continuance of the 15/- per ton subsidy.

The meeting then closed.

NEW AGENTS ASSOCIATION IN SYDNEY.

A number of agents at the Sydney fruit markets have decided to form a Licensed Agents' Association; with Mr. W. J. Sinclair as President, Major-Gen. Gordon Bennett, Secretary, and Mr. Carl Salter, Treasurer.

The President states the new Association would be pleased to co-operate with any and all Associations connected with the trade for the betterment of the fruit industry as a whole.

We must remember that not one thing can be said or done in this life but a thousand objections may be made. Those who wait for absolute certainty in matters of action may wait for ever.

VICTORIAN FRUIT MARKETING ASSOCIATION.

Annual Meeting.

The Annual Meeting of the Victorian Fruit Marketing Association was held at the Board Room, Commercial Travellers' Association, on Friday, October 16, at 2.30 p.m. Mr. A. S. Harrison presided.

The minutes of the 1935 annual meeting, having been circulated, were taken as read and confirmed.

The Annual Report was submitted by the Chairman. Mr. Thiele asked what progress had been made with regard to the selling of Apples, Pears and Peaches by count instead of by weight. Mr. Ward replied that a short amendment was before Parliament, and on its being passed regulations would be drafted making it compulsory for the fruits mentioned to be sold by count instead of by weight.

Codlin Moth in Pears: Mr. Cornish gave details of the research programme which had been put in hand in the Golburn Valley under the Federal Research Grant.

The Annual Report was adopted on the motion of Messrs. Russell and Cave.

Office Bearers: The Secretary reported that owing to the exact number of nominations being received, there had been no election for grower delegates. The following would thus constitute the Executive:—

President—Mr. G. W. Brown.
Committee.

Messrs. W. H. Carne, S. Brown, Ray Bailey (Gippsland); G. Douglas, K. Eagle, H. M. McLean (Harcourt); G. W. Brown, W. P. Hutchinson, H. G. Sprague (Mornington Peninsula); W. Young, J. G. B. McDonald, M.L.A. (Goulburn Valley); F. Moore, J. J. Tully, W. A. Thiele (Metropolitan); C. H. Jost (North West).

Shipper Members: An election being held the following were elected: Messrs. J. B. Mills, K. Weeding, A. S. Harrison, J. W. Barker, F. R. Mellor, E. Russell, F. Cave.

Thanks to Executive: Mr. F. G. Beet moved that a cordial vote of thanks be extended to the Executive for their effective work. He urged that every effort be made for a continuance of the £20,000 grant for research work, as the value of this work would be lost unless followed up. In seconding, Mr. S. P. Cornish congratulated the Executive: they had the support of the northern growers. The presence of shipper members was a source of strength. The motion was carried with applause, and Mr. Harrison duly responded.

Presentation of Colombie Cup: A telephone message was received from the Secretary to the Minister for Agriculture, stating that Mr. Hogan had been delayed on urgent business and was unable to be present. The chairman read a letter from Mr. Colombie, congratulating Mr. J. A. Catto, of Rheola on becoming the permanent

holder of the cup, also Messrs. W. Black and Spurr for high quality packs.

Mr. J. M. Ward, on behalf of the Minister, presented the Colombie Cup to Mr. Catto and certificates to Messrs. W. Black and E. W. Spurr. The recipients suitably responded.

At the request of the chairman, Mr. J. B. Mills gave a review of the Apple and Pear export situation, and a review of the report just to hand from Mr. G. W. Brown. At the Ottawa Conference, stated Mr. Mills, the foundation was laid for an Empire Fruit Council, to regulate as far as possible the supplies of fruit to the British market and recognising first of all the position of the British grower. It was pleasing to recall that the V.F.M.A. was instrumental in creating the Australian Apple and Pear Export Council, and now its influence was felt in the whole world of fruit affairs.

At the recent Empire Fruit Conference, the Apple and Pear Council was represented not only by Mr. Brown, but also by Mr. Everard Ross, of Tasmania, whose wide experience was most helpful. One of the factors which had operated against Australia in the past season in U.K. markets, was the cool store excess of 4,000,000 cases, mostly from U.S.A. Mr. Brown had reported that much improvement was still needed in the Australian pack, but he (Mr. Mills)

was of the opinion that poor prices were not the result of lower quality fruit, but faulty ship's carriage. Fruit which had kept in perfect condition in the Croydon Cool Store was identical with that which had been discharged in poor condition in U.K. Brownheart was definitely due to an over supply of carbon dioxide. Shipping companies were so afraid of brownheart that they had apparently now gone to the other extreme in changing the air so often as to deliver the fruit in a shrivelled condition.

In conclusion, Mr. Mills said that the sending of early immature Apples in February was harmful. There was a firm request from abroad for a further reduction of varieties.

A vote of thanks was conveyed to Mr. Mills by the chairman.

Deputation re Science Officers: It was decided on the motion of Messrs. Moore and Thiele that a deputation wait on the Minister of Agriculture urging the necessity for the proper staffing of the Science Branch of the Department of Agriculture, kindred associations to be invited to send delegates, Mr. J. G. B. McDonald to be asked to introduce the deputation. Messrs. Thiele and Sprague were appointed to attend the deputation on behalf of the V.F.M.A.—the deputation to be arranged, if possible, early in November.

The meeting then closed.

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New South Wales: Griffith Producers' Co-op. Co. Ltd.
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Fruit Prices in the Sydney Market

SURVEY OF OPERATIONS FOR THE PERIOD SEPTEMBER 25 TO OCTOBER 26.

High Vegetable Values Attract Retailer's Money — Valencias at Ruinous Prices — Banana Board Conditions Stabilise Banana Prices — Apricots, Cherries and Plums Commence — Passion Fruit Experience Seasonal Advances — Apples Maintain Values — Citrus Export Finished.

(By L. T. Pearce, Market Representative, Fruitgrowers' Federation of N.S.W.)

THE continued dry weather experienced throughout most of the State of New South Wales has been demonstrated by the general scarcity of vegetables, and values for available Peas, Beans, and other green types during most of the month have been at a very high figure. As is always the case at such a time, much of the ready money in the pocket of the retailer is expended in the vegetable market before the 7 o'clock hour of opening of the fruit market. Prices of Pears, Bananas, Papaws, Tomatoes and Strawberries were maintained, but the heavy rush of Valencia Oranges that occurred about the 10th of the month met with ruinous prices. The dry weather created conditions very similar to those at this time last year, and growers were compelled, in many instances, to relieve the trees of the strain of the fruit.

The steady values that have been maintained for Bananas and the fact that fruit has been attracted from the Queensland market to Sydney is a happy augury for the success of operations of the Banana Board. During the reduced supplies through the Winter the marketing of Bananas has been "straightened out" in many respects, and good experience obtained for the handling of the Summer rush of fruit.

Apples. — Tasmania forwarded 54,431 cases between September 29 and October 20, and it is rumoured that approximately 14,000 cases will arrive this week. Vic. supplies have increased a little, and steady arrivals have appeared from Orange and Young, with a few from other places in this State. In addition to Interstate consignments, a quantity has been released from local cool-store on to the market. Tasmanian arrivals were chiefly Sturmer Pippin, French Crab, Demo. and Crofton, both Del. and Scarlet Pearmain being finished for the season. Amongst the Victorian arrivals, 75 per cent. were Yates, with a few Demo. and R. Beauty chiefly.

N.S.W. Del. and G. Smith appeared fairly plentiful, and extremely large sizes have not always realised the money that was anticipated, in fact, counts 64 and 72 in Granny Smith have at times been released as low as 9/-. Counts 113 chiefly. sold to 16/-, but this price is now difficult to achieve. Amongst the arrivals of Del. there have been sales made to 20/-, but, due to some fruit showing blackness of the inside, more sales have been made at a slightly lower figure, with the object of preventing

obvious wastage. Prices: — For special and standard grades, quoting in three groups (1) 3 in. and over; (2) 2½ in. and 2¼ in.; and (3) 2¼ in. and 2½ in.:—Crofton (Tas.), 8/- to 10/-; 10/- to 12/-; 9/- to 11/-; Del. (N.S.W.), 14/- to 17/-, few higher, 14/- to 17/-, few higher; Del. (Vic.), 10/- to 13/-, 8/- to 11/-; Demo. (Tas.), 6/- to 8/6, 9/- to 11/-; 7/6 to 9/-; Demo. (N.S.W.), 6/- to 9/-, 9/- to 12/-, 7/6 to 10/-; French Crab (Tas.), green 8/- to 9/6, 10/- to 12/-, 7/- to 9/-; G. Smith (N.S.W.), 9/- to 15/-, 13/- to 15/-, 9/- to 12/-, few 13/-; R. Beauty (N.S.W. and Vic.), 8/- to 10/-, 10/- to 12/-, 8/- to 12/-; Sturmer Pippin (Tas.), 7/- to 7/6, 8/- to 10/-, 6/6 to 8/-; Yates (Vic.), 10/- to 12/-, 10/- to 12/-, 8/- to 12/-. Plain and "D" grades lower.

Pears.—Chief supplies are from Victoria, and practically 50 per cent. of arrivals would be Broome Park variety. Very little alteration occurred in prices throughout the month, but it is expected that special quality fruit may achieve a higher value than the figures quoted. Prices:—Quoting in three groups for special and standard grades: (1) 3 in. and over, (2) 2½ in. and 2¼ in., and (3) 2¼ in. 2½ in. and 2½ in.:—Broome Park (Vic.), 7/- to 8/-; 9/- to 11/-, 8/- to 9/-; Jos. (Vic.), 9/6 to 10/-, 10/- to 14/-, few higher, 8/6 to 12/-; Packham's Triumph (Vic.), 9/- to 12/-, few higher, 10/- to 14/-, few higher, 8/6 to 12/-; W. Nelis (Vic.), 9/- to 10/-, 10/- to 12/-, 8/- to 10/-. Plain and "D" grades lower.

Apricots.—The Glangarry variety appeared from the Kurrajong district on the 19th instant, most of the fruit being small but well colored and clean in the skin. Arrivals are not yet considerable, and values have receded from the 8/- to 10/- half bush. case received, to 6/- to 8/- half bush. case.

Bananas.—Arrivals on the Sydney market for the period under review totalled 39,229 tropical cases. New South Wales supplied 34,184, and Queensland 5,045 cases.

Prices.—Regulation graded, first quality fruit:—Six inch, 13/- to 15/-; seven inch, 15/- to 17/-, eight and nine inch, 17/- to 20/- trop. case. Incorrectly graded, medium and poor quality lower.

Cherries.—The first arrivals from the Camden district appeared on October 19, and brought 12/- and 14/- quarter bush. case. The Young district forwarded two or three cases last week, and supplies are likely to rapidly increase from both sources.

Burgdorf Seedling and Early Purple Guigne, values to-day were 7/- to 10/-, with a few to 12/-, and small fruit from 5/- quarter bush. case. Quantities are still inconsiderable, and prices purely nominal.

Lemons. — N.S.W. Special and Standard: — Counts 96 to 125, 2/6 to 4/-; counts 138 to 234, 4/- to 6/-, few 7/-; counts 252 to 270, 3/6 to 5/-; plain grade 2/- to 3/-; Inland, 5/- to 9/-, few 10/- bush.

Oranges, Navels.—A short supply of Navels occurred during the first week of October, and values improved, but by the 10th or 12th instant, supplies had increased, and the rush of Val. occurring, values receded to a very low figure. Most inland supplies, although probably of good appearance when packed, quickly displayed skin markings as a result of washing to remove Red Scale, and low values only resulted. The bulk of these inland arrivals was sold at from 3/- to 7/- bush. Latterly both Murray Valley (Vic.) and Pericoota fruit has been seen on the market, but prices have been unattractive. Some sales are being made above 9/-, but most prices are at 5/- to 8/-. Prices:—N.S.W. Special and Standard:—Counts 64 to 88 (local), 5/- to 7/-; counts 96 to 175 (local), 6/- to 9/-, few higher; counts 188 to 216 (local), 5/- to 7/- bush. Plain, 3/- to 6/- per bushel. Inland, 5/- to 8/-, few 9/- bush. Two-bushel crates, Standard 12/- to 14/-; plain, 7/- to 9/-.

Valencias.—The 12th of the month witnessed fruit accumulating in the market, and, by the 14th, the values of all citrus were affected. For some days Vals. did not appear to sell at all, and buyers then nominated the price that they cared to pay. By the 20th the Orange position was unaltered in respect to most arrivals, but choice quality Navels and Vals. were less plentiful, and from then on demand was always for fresh arrivals, as against stale, accumulated stocks. Stale fruit has been under offer at from 1/- bushel in the endeavour to improve the position.

It is unfortunate that for two seasons running the Metropolitan and Coastal citrus growers have experienced dry weather, and undersized fruit. In addition this season has witnessed the unusually early development of Black Spot, and much fruit was marketed with the object of preventing its ruination upon the orchard. Prices, however, in the market indicate that it would have been preferable for this fruit to have remained upon the orchard. Prices:—N.S.W. Special and Standard: Counts 72 to 96, 4/6 to 5/6; counts 113 to 138, 5/- to 6/-, few higher; counts 150 to 216, 3/- to 4/-, smaller 2/- to 3/- per bushel. Plain grade, 1/- to 3/6, stale 1/- to 2/- per bushel. Two bushel crates, Inland, plain 7/- to 8/-, standard and special, 8/- to 10/-.

Mandarins.—This crop is now practically finished. Prices:—Special, firm,

6/- to 10/-, few 12/-; others, 3/- to 5/- bushel.

Gooseberries.—A few cases of exceptionally early fruit came from the Young district on the 23rd, and realised 9/- quarter bush. case.

Plums.—A few small Early Gem Plums appeared on the 26th inst., but did not experience any big demand. Prices:—4/- to 5/- half bushel case.

Passion Fruit.—Passion fruit had been at the very satisfactory level of 12/- to 14/- until about the 12th of the month, when lighter supplies caused values to improve. By the 13th they had reached 16/-, and 20/- by the 16th. A few sales of extra good quality have since been made above that figure, but most sales are as follows:—Choice, 16/- to 20/-; medium quality 12/- to 15/-; small, 5/- to 10/- half bushel case. A larger proportion than usual appears to be lacking in any pulp or juice whatsoever, the only method of testing being to weigh the fruit in the hand.

Pineapples. — Arrivals for the month totalled 16,041 tropical cases, values being maintained chiefly at from 9/- to 12/-, until the present date, when prices improved and became 12/- to 16/-. Prices:—Counts 12 to 15, 12/- to 14/-; counts 18 to 21, 15/- to 16/-; counts 24 to 30, 12/- to 15/- trop. case.

Papaws.—Arrivals for the month totalled 2,775 trop. cases, and, from 5/- to 12/- at the end of September, values improved to 14/- by the middle of October, at which price they remained.

Tomatoes.—Values were sufficiently attractive to induce Western Australian fruit to come to the market, and most fruit of size and quality is sold at an attractive figure. Again, dry weather conditions had their effect upon portion of the product, most of the Queensland arrivals being small, while glass-house fruit (N.S.W.), also had a fair proportion of small fruit. North Coast arrivals were noticed on October 6, and since that date have increased considerably. Bowen arrivals are now only small in quantity, but plantations in the vicinity of Brisbane continue to forward. The high values received induced many growers to pick their fruit in an immature state, and the prevalence of caterpillars also caused some to consider that the fruit was better on the Sydney market than in their garden plot. The caterpillars, however, developed in transit and in the market, and buyers were reluctant to purchase fruit so affected. Prices:—N.S.W.: North Coast, 9/- to 12/-, inferior from 5/-; special colored to 14/-; few higher; glass-house, 7/- to 12/-, few higher, half bushel case. Q'land: 4/- to 7/-, inferior lower, special colored, higher per half case. Repacked, 8/- to 12/- half bushel case.

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Hobart.

Market Notes and Prices

VICTORIA.

Market Report for October.

Cherries made their first appearance in Melbourne during the last week in October. It is generally expected that Cherries arrive with the first visitors for the Melbourne Cup, and were on time as usual. All supplies were from the Young district (N.S.W.) and opened up in remarkable good order, well colored for early varieties, and were met with a good demand ranging from 6/- to 9/- for 12 lb. boxes.

Passionfruit: Specially good lines were scarce and brought good prices. Medium lines sold well to fair prices.

Oranges: Mandarins finished during the month. Navels are approaching the finish, and those which came forward towards the end of the month were of poor quality. Valencias appeared in good quantity and showed prime quality.

Lemons: Those of the best quality sold freely, but the call for other lines was weak. Many samples were too big and coarse.

Grapefruit: Went along quietly right through October the quality was good and prices kept up nicely.

Apples: Good varieties sold well right through until the last week, when they eased. Poor samples were hard to quit.

Pineapples: In the first two weeks, Pines were moving normally, but then

supplies dropped and prices advanced accordingly. Demand satisfactory.

Bananas: The position remained unaltered during October. It is anticipated, however, that the recent fires that have been experienced in Queensland will affect supplies and prices will firm.

Tomatoes: With the continued cold weather and W.A. Tomatoes arriving on the small side, there was not the usual demand for them during the last half, and when S.A. supplies began to arrive, W.A. was practically finished. S.A. Tomatoes showed good size and are now coming along strongly to better prices. The last week experienced accumulated supplies and prices eased.

Peas and Beans were plentiful and prices were maintained. The quality was excellent.

QUEENSLAND.

Brisbane.—Messrs. Robsons Pty. Ltd. report, under date October 16, as follows:—Weather conditions are now ideal for citrus sales, choice brands of Oranges comprising popular sizes, sold freely at 9/- to-day.

King of Siam Mandarins are selling to 10/-, and Lemons of good keeping quality to 11/-.

Apples: Jons. and Demos. to 13/-, Romes and Sturmers 12/-, G. Smiths 15/-, and French Crabs in green condition 13/-.

Pines.—Smooth Leaf are selling well to 9/- and 10/-, Ripleys to 12/- and 13/-.

Passion Fruit are scarce, good samples realising to 15/-.

Papaws, North Coast, to 8/- trop. case.

Nth. Queensland Mangoes are now available, and are meeting with a good demand at 10/- c/s.

Pears: W. Coles 12/- to 16/-; Jos. 10/- to 16/-, W. Nelis 10/- to 14/-, and B. Park 8/- to 12/-.

Tomato values eased during the week, inferior lines being rather hard to clear, good quality, however, are selling to 11/-.

Bananas: 6's, 10/- to 12/-; 7's, 11/- to 13/-; and 8's, 11/- to 14/-.

Beans to 13/- per 28 lb., and **Peas** to 12/-; all other small vegetables are selling freely.

Produce.—Potatoes (new), to £12 per ton; Onions, 18/- to 20/- cwt.; Swede Turnips, to 10/- cwt.; sweet Potatoes, 4/- cwt., and Pumpkins to £6 per ton.

Warm weather is having a marked effect on vegetable consignments.

Brisbane (31/10/36). — Messrs. Clark and Jesser report as follows:—The most outstanding feature of the market for the past few weeks has been the large increase in the supply of Apples, and this has caused a considerable decrease in values.

The ruling prices at present are Apples, choice Jons. 2½ and 2¾ 12/- to 13/-, 2¼ sizes 8/- to 9/-, Rome Beautys and other colored varieties 9/- to 10/-, Rokewoods mostly arriving faulty 6/- to 8/-, Yates poor demand 9/- to 11/-. Oranges, Vals., large 7/- to 7/6, small 4/- to 6/-. G. Smith Apples 14/- to 15/-. Pears, choice varieties 12/- to 14/-. Lemons 8/- to 10/-. Tomatoes 7/- to 8/-. Bananas, sixes 8/-, sevens 10/-, eights 12/-. Pineapples, Smooths 11/- to 12/- per case. Cabbage 10/- to 12/- per doz. Beans, very scarce 16/- to 18/- sugar bag. Peas 10/- to 12/- sugar bag. Mangoes 5/- to 6/- case. Cherries 10/- to 12/-.

Very dry and hot weather is being experienced here and this is having a very bad effect on the vegetable market.

SOUTH AUSTRALIA.

Adelaide (30/10/36). — Apples (eating) 13/- case, do. (cooking) 12/-; Bananas (Qld.) 14/- to 17/-, Lemons 4/-, Loquats 6/- to 10/-, Oranges (common) 6/-, do. (Navel) 10/-, Pears (eating) 10/-, Pineapples, 20/- Quinces 6/-.

WESTERN AUSTRALIA.

Perth (26/10/36).—Apples, Durns dumps 9/- to 10/6, R. Beauty 8/- to 11/-, Yates 11/- to 14/9, G. Smith 12/6 to 13/9, Rokewood 9/- to 10/-, Spitzberg 9/- to 10/-, Oranges: Vals. flats 2/9 to 6/-, dumps 4/6 to 7/-, Navel, flats 6/- to 9/6, dumps 8/6 to 12/6, Lemons 3/- to 4/-, Loquats 3/- to 6/- (special to 9/6), Tomatoes flats 16/-, half-dumps 3/- to 10/-.

NEW ZEALAND.

Dunedin (16/10/36). — Messrs. Reilly's Central Produce Mart Ltd. report as follows:—During the week increased supplies of fruit and vegetables have been received. Some nice lines of Delicious, Sturmer, Tasma and Rokewood have been arriving, and for these there is a good enquiry. Cooking Apples also have a good demand.

During the week trans-shipment received consisted of Californian Lemons, Grapes, and Raratonga Bananas and Tomatoes. A small shipment of Pineapples came to hand by the "Waikouaiti."

For the last shipment for the season of South Australian Oranges, the booking has been exceptionally heavy.

Table Potatoes have a slightly better enquiry, although values are still low. In seed Potatoes it is apparent that there will be a very heavy carry over in stocks this season. Onions are in better demand, although prices are still much below landed cost. Ripe Niue Bananas are selling well.

Prices:—Per Case: Cal. Lemon 60/-; Grapefruit 35/-. Grapes: R. Emperors, 25/-; White Malaga 25/-, Ripe Bananas, 28/-. Pines, 20/-. Apples: Del. 8/- to 12/-, Sturmers, 7/- to 10/-; Tasma, 8/-; Lord Wolseleys, 7/6; cooking Apples 7/-. Second grade fruit, 4/- to 5/-. Pears: Choice Winter Cole, 10/- to 12/-; cooking Pears 5/-. N.Z. Lemons 10/- to 16/-. Per half case:—Pear Winter Cole and Nelis, 4/- to 5/6.

Herbert Wilson Pty. Ltd.

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Correspondence is invited by the Association.

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Beekkeeping Notes

PREVENTION OF SWARMING.

Often a Problem in Late Spring.
When colonies build up to a populous state during the late Spring and a light honey flow continues to stimulate brood rearing in the hive, the bees are likely to develop swarming tendencies and give the beekeeper an anxious time, states the "N.S.W. Agricultural Notes" for October. Once a heavy honey flow comes on the bees become so busy at storing work that the idea of swarming is forgotten. In swarm control, therefore, the apiarist should aim at holding his colonies together until the heavier flow is experienced.

Ample super-accommodation should be provided, so that the bees are not conscious of any congestion. It is natural that a colony that is over-populous for the size of the hive should look for relief by swarming. The hive entrance should be of a size sufficient to provide ample ventilation to prevent uncomfortable conditions during the warmer weather. Where good combs built from full sheets of comb foundation are employed in the hive, preventing an over supply of drone bees being raised, and where reasonably young queen bees of Italian strain are kept, the risk of swarming is considerably reduced.

Bees are less liable to swarm where there is a good quantity of unsealed brood in the hive. When queen excluders are used it is advisable, in the more populous hives, to move some of the sealed brood above the excluder, and give the queen a chance to lay in some empty combs in the brood nest. In other cases the transfer of a few frames of sealed brood to weaker stocks able to care for it, and its replacement with good empty brood combs or comb foundation is helpful. The aim, as stated previously, should be to delay ideas of swarming.

The destruction of queen cells every eight days may delay swarming for a time, and the transfer of all of the brood from a persistent colony, substituting frames of comb foundation, is usually effective. Where a real swarming fever is evident in the apiary, however, the position is a difficult one.

BEEES IN ORCHARDS.

Mortality Last Season due to Arsenical Sprays.

LAST SEASON, just prior to the trees coming into bloom, fruit growers in the Tyabb and Somerville districts noted the almost entire absence of bees from orchards. This matter was taken up, on request, by the Victorian Fruit Marketing Association, and arrangements were made with Mr. V. R. Davey, of the Meddo Apiaries, Toolern Vale, to supply bees during the period of bloom.

The result was very satisfactory from the fruitgrower's point of view, but when it was discovered that there was considerable mortality among the bees, an enquiry was instituted by the Department of Agriculture.

Report by Agricultural Department.
After investigating the mortality of bees on the Mornington Peninsula, the Department has published its official report. After pointing out that honey bees require pollen and nectar for their subsistence, and their work in cross fertilisation in gathering these products, it is pointed out that there has been of recent years a marked depletion in the number of bees operating in Victorian orchards.

With regard to the incidents referred to at Tyabb and Somerville last season, the Research Chemist of the Department of Agriculture stated the analysis proved the presence of arsenic. While the honey contained a small amount of arsenic, the pollen contained ten times this amount. The danger to bees in this connection could be avoided to a great extent by careful management in orchard work.

VICTORIAN APIARISTS' ASSOCIATION.

Office-Bearers Elected.

The recent election of officers of the Victorian Apiarists' Association for the ensuing year resulted in the following announcement:—President, C. E. Cottman; Vice-Presidents, L. Frost and S. G. Rich; Committee, F. P. Middleton, R. E. G. McDonald, and L. Mills; Secretary and Treasurer, C. W. McIntyre.

The Pig Pen

Keep Pigs Warm

Warm housing is essential for pigs in cold weather. The pigs will improve if warm feed is provided, particularly for the young ones.

Mr. A. F. Gray, N.S.W. pig expert, directs attention to the necessity for providing warm, dry and comfortable quarters for pigs, so that better returns will be obtained and fewer pigs lost.

A cheap and effective shelter is necessary if pigs are to grow rapidly. It should be free from draughts and have a wooden floor. A few trees around the piggery will make the place more attractive and add to its value, particularly if the trees are of a kind that will give shade in summer and in cold weather afford protection from the winter winds.

Observations in many districts, he adds, leads to the conclusion that sows and litters have not the necessary yard room for their proper development. Convincing evidence of the necessity for this is provided by comparing the growth of pigs running in small grazing paddocks with those confined to small yards.

Provide a Creep.
While the suckers are with the sows, it is a great help to both to provide a "creep" for the young ones (a small area fenced off, and a trough provided so that the young pigs can be fed without the mother jostling them about). Where such "creeps" are provided, it is surprising to see the advance made by the young pigs; the gain in weight and growth is astonishing.

Then, after weaning at (say) eight weeks of age, the young pigs should be constantly graded. It is not de-

Vermont Field Day

UNQUESTIONABLY the most successful Fruitgrowers' Field Day so far held in Victoria, was that conducted at the orchard of Mr. F. G. Beet, Railway-road, Vermont, on October 1.

The attendance was estimated at between 300 and 400. Because of the success of the two previous field days, at this orchard, it was decided to enlarge the activities by commencing at 10 a.m. Throughout the day, at schedule times, various demonstrations and lectures were given.

In the lecture sessions, Mr. J. L. Provan, Horticultural Research Officer, Department of Agriculture, spoke of the demonstration and research work of the Department, under its regular activities, and the new work made possible under the Federal Grant. He urged greater attendances of growers at the plots under the supervision of the Department.

Mr. Leech advocated the use of Apple vinegar in preference to malt vinegar and the concoction of acetic acid masquerading simply as "vinegar." At present the Apple vinegar used in Victoria comes from South Australia, and Mr. Leech suggested that Victorian growers would do well to commence a similar enterprise here. In the meantime a greater demand for the product could be created by people demanding Apple vinegar from their grocers.

Messrs. F. Cave and R. E. Boardman told of the development of the pure fruit drink business in Victoria, which had its origin in meetings of the Research Committee of the Victorian Fruit Marketing Association.

Mr. E. E. Pescott, Senior Horticultural Instructor, gave a valued address detailing the Extension and Educational Work of the Department of Agriculture.

Mr. Gretorex (Department of Agriculture) and Mr. D. Black (Pakenham Upper) demonstrated the art of re-working fruit trees.

Mr. F. Moore told of the work of the Australian Apple and Pear Export Council and its constituent member Association in Victoria, the Victorian Fruit Marketing Association, and stated that all growers should have effective contact with their local organisation. The export markets appeared to be shrinking, thus there was urgent need for an advertising campaign to increase the consumption of Apples in Victoria. Mr. J. B. Mills, President of the Australian Apple and Pear Export Council, was scheduled to speak, but an apology was received, as he had been detained in Sydney attending a shipping conference on behalf of the Council.

Lt. Col. Knox, M.L.A., thanked Mr. Beet for making his orchard available for this important Field Day, and also thanked all who had assisted in its success. Mr. Beet suitably responded.

Working demonstrations were given of Harvey ploughs and disc cultivator, also fruit wiper, the Petty Plough, Fordson Tractors, Howard Rotary Hoe, and the Perfection fruit wiper.

Displays were made of Cave's pure fruit drinks, Victor Leggo's sprays, William Cooper and Nephew's sprays, and the publications of the Horticultural Press, the "Fruit World," "Garden Lover," and "Australasian Poultry World."

sirable to run large and small pigs together.

Another important point is to see that ample trough room is available—approximately 1ft. length of trough per pig should be allowed. A bar placed lengthwise over the trough will keep the pigs on their feet and stop them from lying in the trough of feed.

CAREFUL USE OF SWILL.

SOME pork butchers strongly object to swill as a fattener of pigs, claiming that it induces softness and too great a proportion of fat to lean. Used with reasonable precautions, however, swill can give satisfactory results.

Invariably swill contains too much fat, since that forms the biggest proportion of rejects from houses, hotels

and restaurants, therefore it should be removed. This can be done by boiling, when the surplus fat can be skimmed off.

Good swill can be fed to both empty and pregnant stock, and some pig breeders favor it for suckling sows. Pigs under 14 to 16 weeks old are said to make better progress on a less bulky ration, composed solely of meals, but when introduced to fatteners it should be, for a time, fed in moderation to avoid overloading the digestive organs, and to prevent weakening the abdominal walls, which leads to thin bellies.

After about 22 weeks, pigs should be able to cope with quantities of swill, but even then it should not be overdone. In general, it can be said that swill can be an effective means of reducing feeding costs, but it can adversely affect carcass quality.

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SOIL NITROGEN STUDIES.

Early Application of Fertilisers Important.

Mr. A. V. Lyon's Advice.

"Increased growth, accompanied by increased yields, have resulted from applications of nitrogenous fertilisers," says Mr. A. V. Lyon, Director of the Commonwealth Research Station at Merbein, Victoria, in some recent seasonal notes. But Mr. Lyon's statement is not based on theory alone. His pronouncement is made as a result of fertiliser experiments of various kinds carried out over a number of years. His further remarks regarding time of application of nitrogenous fertilisers are of interest to all orchardists.

Time of Nitrogen Application. Important.

Continuing, Mr. Lyon states, "It is recognised that when leguminous cover crops have been regularly grown the soil nitrogen is maintained at a fairly high level. Our practice in recent years," he says, "has been to apply the nitrogenous fertilisers on top of the cover crops as they are put down. This is based on the fact that at the termination of (cover crop) growth the (soil) nitrogen is locked up in the cover crops. Applications (of nitrogen) at this stage are particularly important in cases where cover crops are grown in both rows. Quite recent measurements of nitrogen fluctuations in soils on which cover crops are growing have shown that there is practically no available nitrogen at this period."

As mentioned by Mr. Lyon, this last statement is based on studies of soil nitrogen fluctuations, and this work is likely to be of great significance to the practical orchardist.

There can be no argument that the use of leguminous cover crops maintains good general fertility of the soil so far as organic matter and nitrogen are concerned. But the cover crop depletes the soil of its available nitrogen during its growth, and for a period during decomposition after turning down. This is at a time of the year when natural addition of nitrogen to the soil by means of bacteria, etc., is at its slowest, due to the cold and wet Winter conditions. Moreover, the cover crop is turned down at a time when vines or orchard trees are commencing to demand adequate plant food supplies. In other words, in early Spring all factors, the cold wet weather, cover crop growth and the need for decomposition of same when turned down, mean nitrogen shortage, and this is a time of the year when the tree's or vine's requirements are greatest.

Special Use of Soluble Nitrogen.

It is for this reason that the use of a few cwts. per acre of a quick-acting form of nitrogen, such as sulphate of ammonia, is so successfully used by orchardists in the early Spring period. Such an application has been found to be necessary even on fertile soils or where leguminous or other green crops are grown, to tide over the temporary period of soil nitrogen shortage. There appears, however, to be two rules; firstly, the application should be made before active tree growth commences; and, secondly, the form of nitrogen should be a readily soluble one.

WHICH SOURCE OF NITROGEN?

Controversy will probably always exist on the subject of the relative merits of different forms of nitrogen compounds as plant foods. The technical and commercial aspects of this question offer such interesting and practical opportunities as to engage the attention of agricultural scientists throughout the world.

Much is heard to-day of the superiority of this or that nitrogen compound over the nitrate form of nitrogen under specifically defined growing conditions and an authoritative clarifying statement on this subject has long been needed. This has been provided by Sir John Russell, Director of the Rothamsted Experimental Station, Harpenden, England. Writing in the "Journal of the Royal Agricultural Society of England," Vol. 96, 1935 (p. 347), he sums up this question as reproduced below:—

"The Source of Nitrogen for Plants.—The old question whether plants can take up nitrogen com-

pounds other than nitrates (which are usually regarded as their best food) is being investigated once more. Each generation of works reopens this question, and always with the same result: Other nitrogen compounds can be assimilated, and they are assimilated under sterile conditions. But no nitrogen compound has yet been found more efficient as a fertiliser than a nitrate, and so for the present the practical position remains as it was."

PEA-SORTING MACHINE.

Said to be Almost Human.

At the Imperial Fruit Show in Liverpool, just concluded, an exhibit which received much attention was a machine for sorting Peas. It will eliminate the costly procedure of hand-sorting, and will sort at the rate of a hundredweight in an hour. But, more than this, it automatically rejects all worm-eaten Peas, all dust and dirt, and leaves the Peas ready for immediate use by canners.

GIFT JAM SCHEME.

Millions Club Sponsors Movement.

The Millions Club has revived this year the Overseas Gift Jam Scheme successfully conducted by the Club in 1933, and which was definitely productive of results. The Club has benefited by past experience, and this year the machinery for its smooth operation has well-nigh reached perfection.

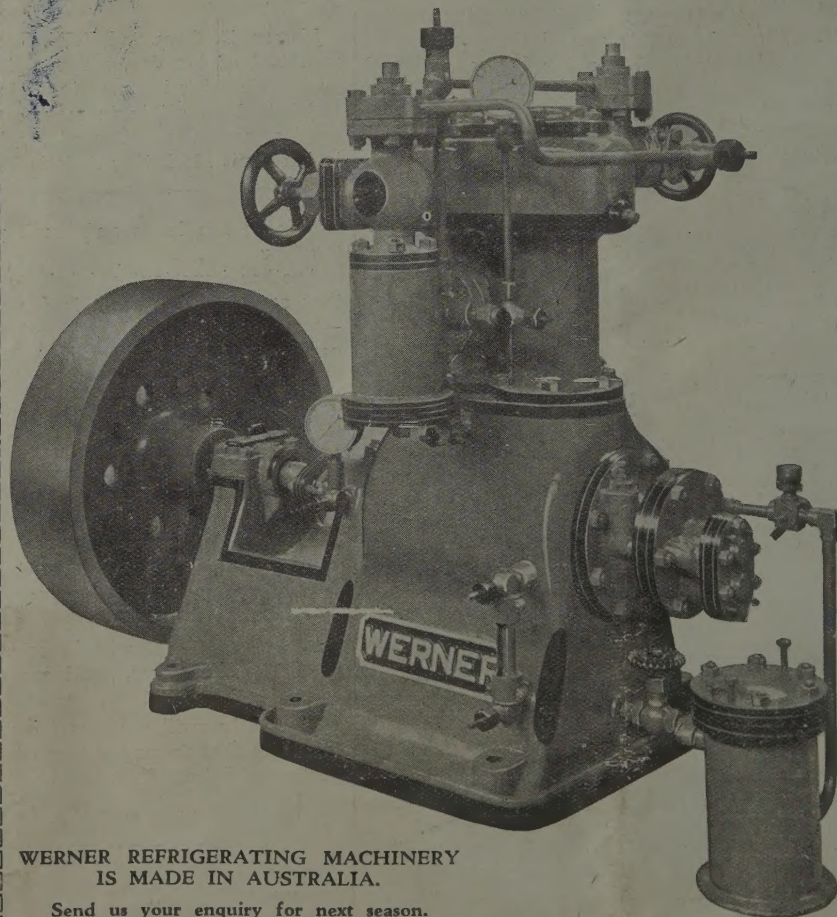
His Excellency, the Governor General, the Rt. Hon. the Prime Minister, the High Commissioner in Australia for the United Kingdom, State Premiers and other leading citizens are giving active support, and the Commonwealth Bank will take orders in all capital cities. One could not wish for better commendation or credentials.

The last mails for Great Britain close on November 12 and 19 in order to be delivered before Christmas. Any further information can be obtained from the Secretary, Millions Club, Rowe-street, Sydney.

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